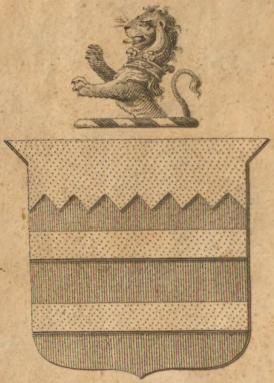

F. Hare Naylor.

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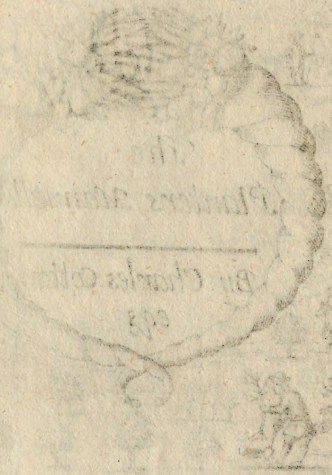

London Printed for Henrij Brome 1675
F. H. van. Houe. fec:

THE PLANTERS MANUAL:

BEING

INSTRUCTIONS

FOR

The Raising, Planting, and Cultivating all sorts of Fruit-Trees, whether Stone-fruits or Pepin-fruits, with their Natures and Seasons.

Very useful for such as are Curious

IN

Planting and Grafting.

BY

CHARLES COTTON *Esq;*

LONDON,
Printed for *Henry Brome*, at the Gun in St. *Pauls* Church-yard, 1675.

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Chicago Botanic Garden
2002

TO THE READER.

THough this little Treatise of Fruit-Trees was only written for the private Satisfaction of a very worthy Gentleman, who is exceedingly curious in the choice of his Fruits, and has great Judgment in Planting; yet having heard that Gentleman say it had given him the greatest Satisfaction of any Bauble he had seen of this kind, I began to think it might not be altogether unuseful to the Publick also, and therefore sent it to the

Preſs, which is all the excuſe I can make, either for the writing or publiſhing of it: But I think it fit to tell you, That although the Planter, who ſhall purſue the following Directions, may poſſibly find himſelf defeated in his expectation (eſpecially in the more Northerly Provinces of this Kingdom) as to the preciſe time of his Fruits maturity, and that a Fruit planted and extended againſt a good Brick-wall, is more proper here with us (where we have never too much Sun) than an Eſpallier Palliſado'd at ſome inches diſtance from it; yet he will infallibly find his Induſtry abundantly gratified in the promiſed effects, at ſomething a later Seaſon. And although the Reader will here meet with ſeveral names of Fruits he peradventure never heard of before; yet we know and ſee, that

more

more tender Plants, as Oranges, Lemons, Citrons, *&c. are yearly imported from much remoter Countreys than* France; *and seeing that (for ought I ever heard) Fruit-Trees are no Contrabanded Commodity betwixt the Nations, I cannot conceive but that it is worth the curiosity, pains and cost to furnish our selves from thence with those of the greatest excellency, both for Beauty and Flavour; nor why we should not as well better our selves by them this way, as altogether be debauch'd by their effeminate manners, luxurious kickshaws, and fantastick fashions, by which we are already sufficiently* Frenchified, *and more than in the opinion of the wiser sort of men, is consistent either with the constitution, or indeed the honour of the* English *Nation.*

Licensed *March* 18. 167$\frac{4}{5}$.

Roger L'Estrange.

THE PLANTERS MANUAL.

Instructions for the Planting and Ordering of Fruit-Trees.

1. FRuit-Trees are to be considered, either according to the different natures of the Fruits they bear, or according to the various Figures and Forms into which cultivated Trees are by the Art and Industry of the curious and skilful, for their better advantage and improvement, commonly ordered and disposed.

2. In the first of which Considera-

tions, we generally and ordinarily divide them into Stone-fruits, as Cherries, Plumbs, and Peaches; and Pepin-fruits, as Apples and Pears.

3. In the second, Fruit-trees are raised with good success four several ways; to wit, in tall Trees growing upright upon their own Bole or Stem, commonly called Standards; in (*a*) 1. Espalliers along by the walls, in *Hay-d'appuy*, or Espallier in the open Air, in Contrespallier, and in Shrubs or Dwarf-trees.

(*a*) An Espallier is a Hedg-row of Fruit-trees set pretty near to one another, so that their boughs and branches are interlaced and interwoven into one another, and in that posture supported by a frame of Wood something like a lattic'd Pale, or with rails, stakes, and other retentions, to keep them firm in the form the Gardiner has laid them.

Contrespallier, a hedg-row planted after the same manner with the other, only differing in this, that the fruit is against a Wall, and the latter in the open Air.

4. After these four ways all sorts of Fruit-trees are successfully to be raised, nevertheless there are that prosper much better in one manner than another, as we shall observe in treating of every

every one apart, without ſpeaking in general of Stone-fruits, and Pepin-fruits, for as much as both the one and the other of theſe kinds are compriſed in theſe four Figures or Poſtures.

Of Standards.

1. THis Figure is more natural to Fruit-trees, than to any other, for as much as experience has demonſtrated to us, that all Apple-trees, Pear-trees and Apricots, as alſo Cherries, and Peaches do of themſelves, (when let alone) thruſt up a Stem, and riſe from the earth to a certain ſtature, before they begin to form their Heads, and to ſhoot forth their Branches; for which reaſon many are of opinion, that the fruits of this ſort of Tree, are better, and of a better taſt, than thoſe which are gathered from Eſpalliers and Dwarf-trees; and they are in the right as to the moſt part of fruits, par-

ticularly the (*b*) Rouſſelet, which is one of the moſt excellent and delicate ſort of fruit we have.

(*b*) A delicate little Pear ſo called.

2. Plantations of this ſort are very proper for Apple-trees, which ought never to be forc'd into any other poſture, unleſs for pleaſure, or out of curioſity, one would make Dwarf-trees of (*c*) Apples of Paradice grafted. They are alſo very good for all ſorts of hard Winter baking Pears, and almoſt all Summer and Autumn Pears. Plumb-trees alſo proſper very well after this manner, as alſo Cherries, particularly thoſe which are grafted upon ſtocks of the (*a*) Meriſier, as alſo the (*b*) Bigarotier, and (*c*) Griotier. But to do well, you muſt not mix theſe different kinds together, by reaſon they require an

(*c*) Pomme de Paradice is an excellent ſweet Apple, that comes of a Pear-main grafted upon a Quince.

(*a*) Meriſe, the ſmall and bitter Cherry.

(*b*) Quære Bigarotier, I think a party-colour'd Cherry.

(*c*) Griotier, a ſowre Cherry.

an unequal distance, Pepin-fruits naturally requiring to be set at greater distance from one another, than Stone-fruits.

3. And herein there are two things chiefly to be observed; first, the fertility of the Soyl, and secondly, the security and shelter from winds.

4. As to the first, a man should never attempt to make a Plantation of Standards, if the ground he designs for that purpose be not very good; for otherwise it will require very great expence to make them prosper, and oft-times this expence proves fruitless, the Trees then coming to fail, at the time when they ought to be in their perfection, as being more in debt for their growth to the Art and labour have been imployed about them, than to the bounty of the Soyl where they were planted.

5. To insist upon the different natures of Moulds, and to explain the marks of their fertility or barrenness, would require a long discourse; and

beſides, all Gardeners, and others, who have been accuſtomed to the earth, are by their own experience and obſervation ſufficiently acquainted with them. It will therefore be ſufficient to obſerve in general, that there are Soyls proper for all ſorts of fruits, as well Stone-fruits as others, as a black ſandy Soyl, when it is fat; and that we call *Terre-franche* (which is a pure Mould or Soyl of it ſelf, without ſand, gravel or ſtones) when it is not too ſtiff, and is eaſie to be ſtirred, becauſe in theſe ſorts of earth, Trees find a great deal of juice to nouriſh them, and with great facility extend their Roots and fibers to extract nouriſhment from all parts. There are alſo other ſoyls, that are very good and proper for ſome certain fruits, and not for others, as a ſtiff earth is much more proper for the Apple than the Pear, and yet more for the Pear than for Stone-fruit; as on the contrary, light and ſandy ſoyls, are more proper for ſtone-fruits.

6. For what concerns covert and ſhelter

ſhelter from the winds, you are to chuſe a ſituation leaſt expoſed to thoſe inconveniences; for which reaſon naked Plains and high Mountains are by no means proper ſituations for fruit-trees; the hollows of Valleys, or the gentle declivities and eaſie riſings of little Hills, are much more proper: But it is withal to be obſerved, that the winds are to be ſuſpected for two things; firſt for the fruits in the Spring, when the Trees are in bloſſom, and thoſe are the North and Northweſt winds, which are the moſt to be feared in this caſe: ſecondly, for their violence and impetuoſity, which not only beat the fruit from the Trees, but very often break the Trees themſelves, or at leaſt ſhake them in ſuch ſort, that they become crooked and writhen, and can never riſe again, nor poſſibly proſper; and this is a Weſt-South-Weſt wind, which Vent d'Aval. is the moſt pernicious, and of all others the moſt to be feared for theſe accidents. And as ordinarily we do not in

these kind of Plantations, plant other than hardly fruits that are there able very well to defend themselves from the frosts, and that even the wind it self does also often hinder the frost, which it self brings along with it, we ought to be more heedful to secure a fruit-tree from the winds that blow betwixt the South and West, than from those that blow from the North-West, and the North.

7. These two things being duly observed, when you would make a Plantation of Standards in a good soyl, you must set them, if you plant Apples only, at eight fadom distance in the Order of Quincunx, which forms an Alley every way; or in simple, that is, single Alleys only, where the Trees at equal distances, stand directly, and in two right lines opposite to one another. The Quincunx Order is the more delightful, provided the Trees be set at a very great distance the one from the other, for otherwise they are apt to shoulder and crowd one another in this

this kind of Order, and to ſhade one another on every ſide. If you would mix Pear-trees in equal number with your Apples, ſix or ſeven fadom is then diſtance enough, and for Pears only, ſix is as much as is required.

8. And although all Planters almoſt commit an error in not duly obſerving this diſtance (for they covet a great number of Trees, and think they ſhould not husband their ground to ſufficient advantage, if they did not ſet them more thick) nevertheleſs it is moſt certain, that two Trees ſet at a fit diſtance, and that have all day long the benefit of the Sun, without being skreen'd from it by any too neighbouring ſhade, are worth above twenty that touch and offend one another. And when the Plants are ſet too near together, it is not diſcerned at firſt, but juſt at the time when they ſhould be in their perfection, they are found to be good for nothing; but when they are placed at the forementioned diſtance, they ſtill grow better and better, and bear

bear both much more, and far better fruit, as having had greater benefit, both of the Air and Sun. Moreover, they hinder not the Plot where they grow, from being employed to other uſes, to the producing of all ſorts of Grain, wherein alſo the labour that is beſtowed upon the one, is of very ſignal advantage to the other.

9. This ſeparation and equal diſtances of Trees, is very neceſſary, not only for the pleaſure of the eye, which is infinitely delighted with this ſymmetry and uniform Order; but alſo by reaſon that this equal diſtance is the cauſe that the earth equally diſtributes nouriſhment to them all alike, and gives them equal ſtrength and vigour.

10. The diſtance of Trees being thus obſerved, holes are next to be made to plant them in, which are alſo to be digged and turned up ſix foot ſquare, or thereabouts, and two or three foot deep; which if they were made a whole year before you plant your

your Trees, so that the earth which is cast up, and that which remains in the bottom, might receive the Air, the Sun and the Rain, during the four Seasons of the Year, the Trees would doubtless prosper infinitely better; the reason of which is, that the earth being cold and dry in its own nature (both of them qualities contrary to generation) can produce nothing of it self, and only becomes fruitful by the mixture of the contrary qualities it receives from the Sun, the Air and the Rain. And therefore it is, that a stiff or stony Soyl produces nothing to purpose, by reason they are so thick and stiff, that they cannot be penetrated by the other Elements. It is with the earth in some sort, as with the water, of which the best is that which sooneſt, and with greateſt facility receives the strange and uncouth qualities that are applied unto it, which is the reason that we experimentally see, that the new earth drawn from the bottom of some deep Pit, remains a long time bar-

barren, till it has received its fertility from the mixture and participation of the other Elements, and then, that is to say, a year after, or thereabouts, it begins to produce Grass and Simples. And that also is the reason why the uppermost Mould of the earth is always better, more fat and fertile, than that which is lower within. Now if the earth drawn out of these holes, had been in like manner long exposed to all the influences of the Air, without doubt it would assume these good qualities, as well at least as that in the bottom (which also in some sort participates of the benefit) by which means whoever should plant his Trees in this earth, would find it much more nourishing, and should have a better account of his Plantation.

11. This Rule may indifferently serve for all sorts of Trees, and chiefly for the Trenches you make for the Espalliers, because that way of planting, both requires and deserves more care than all the others, but it is nevertheless

leſs ſeldom or never put in practice; for as much as very few have the patience to ſtay a whole year after they have once taken a reſolution to plant, and have ſet forth ground for that purpoſe, and they look upon this long preparation as a loſs of ſo much time, wherein a Tree might already have taken good root, and have advanced ſo much towards its perfection. As for what concerns Eſpalliers, there is yet another inconvenience that hinders them, which ſhall alſo be ſpoken of in its due place.

12. The holes being thus made, you are in the next place to cull out Trees all of one and the ſame ſtature, and thoſe either already grafted (which is by much the beſt, for the reaſons ſhal be given when I come to ſpeak of Pepin-fruits) or if thoſe are not to be had, then ſtocks of the ſame height to graft upon, that is of ſix or ſeven foot on the Bole, and about two or three inches thick (for you muſt ever be careful to meaſure the height to this proportion of

of thickneſs) which alſo are to be choſen ſtraight, and carefully pulled up with all their roots. In planting of which, it will be very good to give them ſome help under the root, of fat earth, or dung well rotten, and earth mixt together (wherein you are alſo to be careful, that the dung do not touch the root) for one may eaſily aſſiſt a Tree already planted from above, but we never riſe again under the root to help it there.

13. Before you place the Tree in the hole deſigned for it, you muſt refreſh the root by neatly cutting off the extremities with your pruning-knife; and you are always to cut them on the under-ſide, ſo that the wounds and cuttings may exactly be placed upon the earth; for it is from thoſe cuts that the Tree thruſts out its firſt rays and fibers, which by this means creep into, and diſperſe themſelves thorow the upper Mould, and cauſe the Tree to take faſter hold, and to ſtand firm.

14. Dung, fat earth, and all the other

ther improvers which ſhall be treated of, when we come to ſpeak of planting Eſpalliers, are alſo very good for great Trees; but they are not ſo neceſſary. And as it would be a matter of great difficulty to employ this particular care in great Plantations, that take up great ſpaces of ground; ſo alſo when the Soyl it ſelf is very good, Trees proſper well enough without all theſe helps.

15. You muſt not ſet them too deep in the earth; for beſides that, Roots buried too low in the ground, do not ſufficiently participate of the influences of the Air, there is another inconvenience in it, which is, that the earth above being always the better, and the Tree receiving the nouriſhment that comes from thence, as that which is moſt proper for it; if it be ſet too deep, it thruſts forth new roots above to attract the nutriment of the better earth, and often ſuffers thoſe below to decay and periſh, which does not only incommodate, but very often wholly de-

deſtroys the Tree. It will therefore be enough to ſet the root a foot deep only in the earth, wherein you are to take care to cover it with new Mould that is not lumpy, and with your hand to diſpoſe it all about the little ſtrings and fibers of the roots, that there may be no cavities betwixt the earth and the root; for ſuch vacuities would infallibly beget rottenneſs and ruin.

16. It is good alſo to ſhoulder or clod up the Tree for three foot about, and ſome four foot high, and afterwards in labouring it over again by little and little, to abate the heap, till the earth be again ſettled to its former level.

17. It is alſo very convenient to cover the Trees by raiſing ſtraw to a certain height round about the Stem, by which means the bark will retain its beauty, the ſap will not be exhauſted by the heat of the Sun, and it will be preſerved from Moſs.

18. If the root of the Tree be not of it ſelf ſtrong enough to withſtand the force of the winds, it ought to be

propt

propt and ſupported with a ſtake, or a good ſtrong Pole almoſt of its own height; but then you muſt take heed this prop be not of cloven or ſawn Wood with edges, neither gouty, nor full of knots, leſt it ſhould hurt the Tree, and gall or wound the bark; but it muſt be round, and tyed after ſuch manner, that it do not interfere with the Tree; to prevent which, there muſt alſo be ſtraw or hay lapt betwixt them.

19. Some uſe to prune the Trees before they ſet them, both by reaſon it is to be done at greater eaſe in hand, than when they are planted; and moreover, becauſe the force of pruning is apt to ſhake them when they are already ſet in their places; but withal, men uſually planting in the beginning of Winter, the froſts and other injuries of that rude Seaſon, do ſometimes incommodate a Tree ſo lately wounded, and pierce deeper into its heart by ſuch overtures. Wherefore it is better to ſtay till the Spring before you

lop or cut them, especially if year-old graffs, which also must be so done, as almost to leave them no branches at all, to the end, that having so much less Wood to maintain, they may the better recover and take new root with greater vigour.

20. It is very requisite to rank the Trees according to their kinds: as for example, to set one whole row of Renate-Apples, and another of Summer-Pears, and all in such sort, that the principal fruits, and those that are the best, and will longest keep, be in much greater number than those which are planted for curiosity only, and will not keep so long as Summer-fruits, though they are very excellent in their kind.

21. In the whole body of a Plantation ranged in this Order, you are by no means to mix any Stone-fruits at all; but you may plant them in the Alleys that are round about it, placing Plumbs, Cherries, Griotiers,* Guiniers, and Bigarotiers, at six and six yards

* A sweet sort of Cherries

yards distance one from another, or further off, especially the Bigarotiers, which extend their branches very far when grafted upon the Merisier.

22. Now all these Instructions presuppose a good Soyl, without which a man should not over-easily be induced to undertake these kind of Plantations, but content himself with Espalliers and Dwarf-Trees only, which take up less ground, and that consequently is with greater ease to be prepared, by introducing good earth into barren and ungrateful places: but notwithstanding, if you will needs plant in an ill Soyl, you must then open your holes eight foot square, and three foot deep, and separate the better and more likely earth that is turned out (which is commonly the uppermost) from the rest, and afterwards fill them up with that select Mould, and other that shall be brought in, of the best can be found, with a great deal of very old and rotten dung and marl, or the scowring of Pools or Fish-ponds, provided it have

lain at least a year before; for it would otherwise be too cold for the Trees, and make them die, as on the contrary, dung is too hot, if not well consumed; and especially (as hath been before observed) you must take good heed, that the Roots touch not the dung, but that there be always earth between.

23. With this expence Trees may be made to prosper in any Soyl whatever. Nevertheless, if it be so stiff a clay, or so stony a ground, that the Trees cannot at all pierce it with their roots, then the forementioned holes will be yet too little to supply a Tree with so much nourishment as is necessary for its due and expected growth; and you must make them still more large, for otherwise the roots of the Trees coming to touch the earth, which is so much an enemy to them, stop short, and curl themselves back again into the hole from whence they came, where they work the same effect with Trees planted in boxes, and presently devour all the vertue of the

good

good earth was put into them.

24. Plantations of great and full-grown Fruit-trees, require also to be husbanded as well as the others, and you must bestow labour upon them at least four times a Year; to wit, in the beginning, and at the end of Winter, and then as deep as you can; and twice in Summer only to kill the grass, and to keep the earth from growing hard and parching with the Sun; wherein you are to rely very much upon the labourers dexterity and care, to cultivate all these Plantations with the Plough, & yet there is no other way to turn up so much ground as they possess when they are of great extent, without an excessive charge; but you may give the Husbandman caution to bring his Plough within a certain distance of the Trees only to avoid accidents, and to turn up the remainder with the Spade, the Hoe, and the Mattock.

25. Now the deep husbandry or digging that is used to Trees in the beginning, and at the end of Winter,

produces several good effects; for by this means the good earth, which is always uppermost, is turned down to nourish the Tree, and the lower earth is laid aloft to be made better and more fertile, by the same reasons; and it will also fall out, that all the moisture and fatness which comes from above, will penetrate to the bottom, which by that means will be kept supple and light, and consequently easie to be penetrated by the new roots that put out, which are like so many little emulgent veins by which the Tree extracts its nourishment from all parts.

26. But on the contrary, in Summer you are by no means to stir the earth too deep, lest the heat pierce too far into it, and hurt the roots of the Trees; and besides, the Husbandry will be sufficient if you kill the ill weeds, and hinder the earth from crusting too much with the heat of the Sun.

27. You may also make Plantations of this sort of Stone-fruits in tall Trees, and they are very pleasant when se-

ſeparated according to their different kinds; as for example, a Cherry-Orchard in one place, a Plumb-Orchard in another, and a Peach-Orchard in a third, which Plants are alſo to be cultivated after the ſame manner as the others, obſerving only the difference of their diſtances and ſtations. Plumbs, Apricots, Cherries, Bigarotiers and Griotiers require to be planted at ſix yards diſtance betwixt Tree and Tree, and rather more. Cherries not grafted, or that are grafted upon other Cherry-ſtocks, do not require ſo great a diſtance, and it will be ſufficient to plant them at the diſtance of betwixt twelve and fifteen foot, and Peach-trees the ſame: But it is to be noted, that Peaches and Apricots are very impatient of froſts and great winds, and therefore cannot proſper if not planted in ſuch a place of advantage, as ſhall ſecure and ſhelter them from theſe aſſaults.

28. There are two ſeaſons proper for planting, namely, Autumn, and

the Spring; for Summer is totally unfit, both by reason of its violent heat, and also the sap of the Trees being then in their branches, they would wither in transplanting, and cause the Tree it self to die; neither is Winter proper, by reason of the frosts and great rains which deprive the earth of such a disposition as is necessary for the entertaining of Plants, unless in a dry Soyl, where the earth does not clog nor run into morter, and in such a place one may plant even in the rain. The beginning of the Spring, when the earth begins to dry a little, is good for several sorts of Trees; but for Fruit-trees, Autumn is incomparably better, than any other season. One may plant presently after *September*, that is to say, in the middle of *October*, or about that time, by reason that then the sap retires from the branches into the root, which so soon soever as it shall happen, a Tree is to be removed without any manner of danger, forasmuch as the sap of the Tree is no

longer

longer in the heart, but in the rind or bark only, and that is the reason why we sometimes see Trees totally decayed and rotten at the heart, which yet fail not for all that of bearing fair and good fruit, the sap communicating its nourishment to the branches by the bark only; wherefore when the sap shall no more appear in the bark, it is a good time to plant. The advantage of planting betimes is twofold; for in this season one may easily make choice of fair days, and a fair Sun for this purpose, which is a thing that very much contributes to the making Plants to prosper; and moreover, the earth that is then stirred being sound, and not as yet oversoakt, easily crumbles and moulders about the root, and keeps it in a good Mould the whole year about. But there is yet another, and a very considerable reason, which is, that Trees early planted, recover themselves before Winter, and find themselves already strong, and well acquainted with the Soyl when they

are

are to put out in the *Spring*; for the sap which in Winter is retired into the root, does no more lye idle in this Season, than any of the other three, but puts out new threds and fibers from the root, as experience shews; and it is most certain, that plant a Tree in good earth in *October*, and take it up again in *January*, and you will find it has put out new roots; and so by this early planting you secure the Tree against the heat of Summer, and moreover, gain half a year in its growth.

29. Yet is it not all, to have planted Fruit-trees well, and to have prepared the ground with all imaginable pains and care, you must moreover be careful to correct them, to take away the superfluous branches, and to hinder the good from being pestered and incommodated with those that are useless and good for nothing. Nature 'tis true, does ever labour towards her perfection, but she cannot arrive at it without being assisted by Art. Trees when planted in a fruitful Soyl, do voluntarily

luntarily disposse themselves towards their most advantageous Figure and Proportion; but you must also help and assist them, that they may arrive at the perfection for which they strive. This, whilst they are yet very young, and that the branches you would take away are small, is to be done with the pruning-knife, and when grown stronger, with the Joyners Chizel and a Mallet; but that is never to be done the first year, for it is enough at first if the Tree take, without demanding any more, you must be content to receive all the branches it will present you, and it will be time enough a year after to make your choice, to take away the bad, and to preserve the good. It is with Trees newly planted, as with young Horses, which we never go about to manage in their first years, but are content to see that they feed well and thrive. You must notwithstanding begin betimes to cut your Trees, that is to say, the second year, or at the latest, the third; for it is much easier

to

to bring them to a handsom head, when you begin so soon, than if you should defer it longer, and the Tree suffers less when the superfluous branches are taken away in their shooting, than when you shall be obliged to cut them off when thicker, and grown more strong.

30. There is no precise instruction to be given for the cutting of great Trees, and therefore the eye and judgment of the Workman must be his rule; only you are in general to observe, whether in pruning young Trees lately planted, or cutting those of longer standing, not to suffer branches to grow over one another, nor to leave too much wood upon the Tree, and so to cleanse it, that the branches may not shade one another; as also to take away a great number of the little branches that grow within the Tree, and that almost never bear any fruit; but withal, you are to have a special care to cut what you take away very even, and close by the trunk of the Tree, to

the end that the sap which rises may presently cover the wound with a new bark. For this purpose the Joyners Chizels are exceeding proper, and those you are to have of several bredths, according to the branches you would cut. This instrument is also of better use for this kind of work, when helved upon the end of a broken half-Pike, or any other staff of eight, ten, or twelve foot-long, by which means, without climbing a Tree, you may at great ease take away all you desire, and may better chuse out the useless branches mixt with the others, to cut them with much greater facility than with a pruning-knife. You must also evermore observe to cut and prune your Trees always in the wain, especially that of *January* and *February*; not but that you may cut strong and able Trees in the wain of *November* and *December* also.

31. All sorts of Trees endure the knife, and willingly part with their superfluous wood whilst young and grow-

growing; but the Apple-tree will not part with his branches when a little in years, and that he is already arrived at his perfection, for as much as he has much ado to recover, and oftentimes periſhes by the wound. The Cherry-tree alſo, the Bigarotier and Apricot, are impatient of dreſſing when old, unleſs totally lopt off, to make them ſhoot forth new heads. The Pear and Plumb ſubmit better to the knife, eſpecially the Pear.

32. When there is rotten Wood got into a Tree, you muſt be careful to cut it out with a kind of hollow Chizel the Joyners call a Gouge, which is to be handled after the ſame manner you do the ordinary Chizel, and is a very proper inſtrument to enter into the body of the Tree, and to ſcoop out all that is dry and rotten, without endamaging the reſt.

33. Moſs is prevented from growing round a Tree, by littering them up with ſtraw, as has before been directed; but when it is once come, you muſt take

take care to ſcrape it off with a wooden knife, or by rubbing the bark of the Tree to which it clings, with a new coarſe cloth, or a good hard wiſp of ſtraw after rain, when it will fall off with greater eaſe.

34. As Standards have many things proper for them in common, with the others that are raiſed in different forms, ſo many of theſe inſtruments that are properly made for the one, may indifferently be employed about the other; and it is alſo certain, that if we would take the ſame pains, and make the ſame preparation for the planting of Standards, which ought to be obſerved in Eſpalliers, they would proſper infinitely better; wherefore, the curious, who will not ſpare for coſt, would do well to prepare the earth after the ſame manner, both for the one and the other.

of

Of Espalliers.

1. WE call those Trees Espalliers which are pallisado'd along the Walls, and are with good reason esteemed above all other ways of planting, principally for four things.

2. First, for their Beauty, for they are an exceeding great ornament to a Garden, when well sustained, and neatly kept, and that we see them interwoven in good order along by the Walls, and all covered over with their leafs and fruits.

3. Secondly, for the rarity of their fruits, for as much as the best, and those that are most rare, as the Bergamot, the Winter Boncrestien, and most of those Peaches and (a) Nectrines, which prosper not in Standards, easily ripen and come to perfection in Espalliers.

(a) I take a Pavie to be a Nectrine, though *Cotgrave* calls it a bastard Peach, or a fruit like a Peach.

4. Thirdly

4. Thirdly, for the quality of their fruits, it being most certain, that even those which prosper best in the open Air, are incomparably better in Espalliers, both for largeness and colour.

5. Fourthly, for their abundance, which is such, that when an Espallier is well supported, you must always pull off above half the blossoms with which it overcharges it self, and very often a great many more after they are knit, whereas this abundance is very rare in Standards; and if it one year happen by chance, the two following shall either be totally without fruit, or at least they will be very thin.

6. All which advantages proceed from the heat of the Sun, which is very much augmented by the repercussion of the Wall, and from the shelter they receive in such a location from the injury of winds, to the violence whereof these Trees are not subject, as being totally defended on the one side by the Wall, and on the others, being tyed and complicated within one an-

ther, they can receive no harm.

7. Espalliers also require more care and labour than all other sorts of Plantations, wherefore well to examine all that is necessarily required to bring them to their perfection, it will be convenient to consider, what is to be done before you plant them, both as to the preparing of the earth, and the choice of the situation, which are both to be duly considered in planting this sort of Trees; as also what is to be done after they are planted, to cultivate and improve them.

What is to be observed before the Planting of Espalliers.

1. THe first thing that he who will plant an Espallier is to observe, is to expose it to a good aspect of the Sun. Art and labour can effect all other necessary things in any situation whatever, but for this it is impossible

ſible to have it, if we do not meet him at his firſt arrival.

2. There are two good Poſitions which ought always to be obſerved in the planting of Eſpalliers in Gardens, and that may alſo indifferently ſerve for all other ſorts of Plantations; of which the firſt is that which has the Sun full upon it at his firſt riſing, or preſently after, and retains it till two or three of the clock in the afternoon; the ſecond is that which begins to receive the Sun about ten a clock in the morning, and loſes it not till it go down. Theſe two Poſitions are almoſt equally good, for they have the one as much heat as the other, though there is notwithſtanding a certain principal vertue obſerved in the riſing Sun, which cauſes thoſe Eſpalliers which are expoſed unto it, to be both ſooner ripe, and of a better colour than thoſe in the other Poſition; which alſo proceeds from this, that at the end of Winter, and in the beginning of the Spring, the Sun dwells much

longer upon this Position, than upon the other, for it almost continually shines upon it, from the rising to the setting. The second Position has also another advantage particular to it, which is, that it is less exposed to the danger of frosts than the other, by reason that the frost does little harm to Trees in the Spring, unless the Sun dash upon them whilst the frost is yet hanging on; for then the two contrary qualities of heat and cold beget a conflict, which the Tree is so sensible of, that the leafs and blossoms thereof appear stricken and blasted; but when the frost dissolves of it self, before the Sun comes to shine upon it, it does no harm at all, and afterwards drops off as innocently as dew. The first Position receiving the Sun from its first rising, if there have a frost hapned in the night upon the Trees, they are then subject to this accident; but on the contrary, the Sun only beginning to shine upon the second at ten or eleven of the clock, if a frost have hapned

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in the night, it is absolutely thawn and dissolved of it self before the Sun comes to strike upon it. There are also some Soyls so burning, that the first Position is too hot, so that oft-times the fruits by the excessiveness of the heat, cannot arrive at their full proportion and fairness. But, to conclude, all things duly considered, the first is the better for fruits that require a very hot Sun, as * Muscats and Peaches; and the second is as much to be esteemed for Pears.

* A Musk Cherry, also a Muscadine grape.

3. These two Positions are the best of all others, not only in respect to the heat of the Sun, which is doubtless the principal reason; but also because they defend the Espalliers from the North and Northwest winds, which are the worst for frosts, especially the Northwest, which commonly blows in the Spring, and which is so much the more dangerous, because it very often brings with it a frost after little rains, which soften the Trees, and

render them more penetrable, and apt to freeze. Of these two Positions the first is totally covered from that, and the second from the North.

4. All the principal and most delicate fruits, as Peaches, Pavies, Bonchrestiens and Bergamots, ought to be plac'd in these Positions. There are others nevertheless which are not wholly to be rejected, and may do very well for more hardly fruits, as all Summer-Pears, and some Winter-Pears also, as shall be explained in the Catalogue of Fruits.

5. The place being thus chosen, the Wall which is to support the Espallier, must be twelve or thirteen foot high, to the end the Tree may have its utmost stretch when it shall come to perfection. It ought also to be parget-ed or rough-cast, either with Plaister or Lime, not for ornament only, and to make it more handsom; but also by reason that a thousand mischievous things, snails, worms, and other corruptions, breed in Walls that are made of

of mud only, and Rats, Mice, and other Vermine, ſhelter themſelves in the holes and cavities which they there find, and very much annoy the fruits. If in building theſe Walls you would there place little Sheep-ſhancks in the Order of a Quincunx, the Lozenges whereof to be four or five inches ſquare, and thoſe to peep an inch only out of the rough-caſt, you would find them of great uſe, and the Palliſado of your Trees would be made at much greater eaſe, and much leſs expence. 'Tis true, one may make ſhift to faſten them into the Walls already made, but never in ſo good order, as if plac'd in building the Wall. The uſe of theſe Sheeps-bones ſhall be explained, when we come to ſpeak of the manner after which Eſpalliers ought to be Palliſado'd.

6. Theſe things thus done, nothing more remains, but only to prepare the earth, of which there is ſome ſo good of it ſelf as ſeems to require no manner of help, and to be capable of pro-

ducing fruits in their greateſt excellence, without other aſſiſtance than the ordinary pains and culture. There is alſo on the other ſide ſome Soyls of ſo malevolent a nature, as can never be made to produce any thing that is good; and that a man is forc'd totally to remove, to bring better into its place, if he intend to have his Trees to proſper. However, that which is contained in this Article, ought notwithſtanding to be equally obſerved in all ſorts of Soyl, if not in that which is ſo abominably bad, as that it muſt be totally removed. But a man ought never ſo much to preſume upon the bounty of a Soyl, as to neglect any part of his preparation; for if it be able of it ſelf to produce fruit that is very good, it will produce incomparably better if ſeconded and aſſiſted, and that to its own fertility it ſhall receive all the advantages and improvements, the Art and induſtry of the Gardiner can add unto it. You are then to open a Trench eight foot wide, and three

foot

foot deep, and to dig it sloping, that is, wider at the top than the bottom, on that side next the Wall, to the end that this overture may not endanger the Walls foundation; and in casting out the Earth, you must separate the good from the bad, that the Trench may only be filled up again with the best, and that the worst may not again be thrown into it. If you could leave this Trench open a whole year before you fill it up again, undoubtedly the earth, at the bottom, by so long lying exposed to the open Air, as also that which has been thrown out, would receive a very great advantage, for the reasons before given, in the tenth and twelfth Articles of the Chapter concerning Standards: But besides, that a man can very hardly perswade himself to so much patience, it is to be feared, that the Wall in the mean time would fall, or be very much weakned, the foundations of it being in a manner wholly laid open. The earth being thus thrown out, you should then lay

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in the bottom of the Trench a bed of half a foot or eight inches thick of good fat earth, drawn a year or two before out of the bottom of some Marish or Fish-pond, and well consumed in that time; or Turf digged out of some green high-way, where there is only short grass, and no twitch-grass, nor other sorts that devour the fatness of the earth. This Turf ought not to be flead off above four inches thick, and being got betimes in the year, is excellent for Trees; for the salt of this earth, which has long lain idle, still mounts upward, and is attracted by the heat of the Sun, and the little nourishment that short grass requires, has nothing wasted its substance, so that it remains entirely in the Turf; but then you must break and mince it in the Trench, till it be in a manner reduced to powder. You are then to lay a bed of old dung very well rotten, and well wasted, of four inches, or half a foot thick, and another bed of the best of the earth that

was

was turned out of your Trench; which three different beds must be wrought with very great labour, and such as shall shuffle and mix them with one another (which is to be done with the spade) until all these different things make up one body together; after which you are also to lay three other distinct beds of the same substances, which must also be laboured after the same manner, till the Trench be heapt up half a foot above the level of the Alley, forasmuch as the earth so tost and tumbled will shrink so much at least, when the Winter or the rains have depress and washt down the Husbandry. If you have none of this fat Soyl of Pond-earth or Turf, you must then put in so much the more dung, you may also throw in the shovlings of some old ditch exposed to the South-Sun, which are commonly very good, or the sweepings of Courts, and any thing whatever that Gardiners know to be good to mend the Soyl, provided it be well wasted, and is not

too

too hot: but you shall have a particular Chapter of what is to be observed in the choice of all sorts of Dung and Manure.

7. It is of very great importance to give all these Manurings to the earth you prepare for Espalliers at the first, to the end that the Trees being once planted, you may not need to give it any more improvement, at least of a very long time after; and by this means also, when the Trees shall come to bear, the Dung being totally consumed and turned to earth, will give no ill relish to the fruits they shall produce, which oft-times falls out, when they lay a great deal of Dung to Trees already settled in their place.

8. If peradventure you shall not have sufficient store of dung plentifully to furnish the bottom, and your upper bed too, you must then dispose the greatest quantity into the bottom, still reserving some, but the lesser share for the bed above, because you may at ease, at any time, supply that defect in

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the upper part of the earth, and as oft as you ſhall think fit; but the Trees being once planted, you can no more dive under their roots to give them any improvement there.

9. It is good to lay the Alleys of your Eſpalliers round and high ridged in the middle, ſo that the midſt of your Walk may lye higher than your Eſpallier, to the end that the rain which ſhoots from the Alley may run into it; and alſo, that the helps you give it may remain, and not be waſht away.

10. This way of preparing the earth is principally for Pear-trees; for Peaches and Apricots are to be planted with leſs ado, and do not indeed require ſo much dung; but you muſt not fail, even for them as well as the other, to open the earth the ſame wideneſs and depth, though you turn in the ſame earth ſimply as it came out, without any mixture or help at all, for as much as the roots of the Trees delight in this rifled and lightned earth, and come on more in one year, than they would do in any other in many. *Of*

Of what is to be observed in Planting Espalliers.

1. ALl these things being thus ordered and disposed, you are next to observe the distance at which your Trees are to be set; wherein also you are to be guided by the nature of the Trees themselves, and are to plant them at several distances according to their different kinds: For Plumbs, Apricots and Cherries are to be planted at six yards distance from one another, by reason that their branches extend themselves very far; and Pear-trees at the distance of fifteen foot, or four yards at the least, because they do not spread so wide.

2. In the earth prepared after the manner prescribed in the foregoing Chapter, you are to make little holes of about three or four foot square, and a foot deep, in such sort that it may easily

easily receive all the roots of the Tree you design for that place; which being done, you must take old dung very rotten, or fat earth that has lain very long, and mix it very well with twice as much earth, and put part over, and part under the roots of the Tree, which you are to set half a foot within the earth, and a foot from the Wall, sloping and leaning towards it, so that the Bole appearing above ground, may not be above three inches from the Wall; for to tye and fasten the branches as they ought to be, it must not be too far off, and the root being more remote, extracts also some nourishment from the earth, that is betwixt the Wall and it. You must also refresh the roots with the Pruning-knife, after the manner set down in the thirteenth Article of the Chapter of Standards, leaving all the hairy Fibers you can possibly save; and be sure the roots be well covered with that mixt earth, so that no vacuities remain, as has been said before.

3. You

3. You are alſo to have a care, that the Dung touch not the roots, becauſe it would heat them too much, and the Summer following peradventure make them die, unleſs it be ſo old and rotten, as that it has loſt all its heat, and that it be in a manner reduc'd to earth. It is good to forbear cutting the Trees you ſet, till after the great colds are paſt, that is to ſay, till the wain of *January* and *February*, and ſet them at firſt entire, without taking away any of their branches, for the reaſons already given, in the tenth Article of the forenamed Chapter of Standards.

4. When you prune Trees, you are to cut them ſloping in form of a Hind's foot; and obſerve, that the Cut be on that ſide next to the Wall, to the end it may not be expoſed to the Sun, which otherwiſe would make a cleft and a wound, that would hurt it very much; which place ſo cut, ſhould alſo be plaiſtered and covered over with the pureſt earth, or that and hay tempered and mixt together, or plaiſtered with a cer-

certain Gum the Embroiderers commonly use.

5. You ought to leave but very few branches upon the Trees you plant after this manner; for those that shall sprout out new will be much better, and more easie to govern, than those you take away.

6. You may begin to plant immediately after the Month of *September*, that is to say, in the beginning, or in the middle of *October*, and the sooner you begin the better; but if the earth should then prove too dry, and not yet soakt enough with the rain, you must then abundantly water the Trees that are set so soon.

7. Some there are, who in planting have a great regard to the Moon, and believe the wain to be much more proper for this work than the increase; but experience shews this Observation to be vain: It is much better ('tis true) to prune in the decrease, than the increase; but you may (as I have said elsewhere) defer pruning a long time

after they are planted.

8. You ought to be very curious and careful in the choice you make of thoſe kinds of Fruit you intend for Eſpalliers, and never ſhould plant any, but thoſe that can proſper no other way, or that are ſo excellent you deſire they ſhould never fail, or that you would have in greater perfection; for they thrive to a greater largeneſs, and come to a better colour in Eſpalliers, than otherwiſe, and infallibly bear every year. Of theſe the Bonchreſtien, and the Bergamot are the chief; the Rouſſelet, and the little Muſcat of the Summer-Pears, the Amadoſte, the Portail, and the Saint Lezin of the Winter-Pears are the next. All which different kinds ſhall be more fully handled in the Catalogue of Pears, in which every one ſhall find the kinds he moſt affects, and has the greateſt deſire to have, and how they are to be planted for their better propagation. Only you may in the mean time obſerve, that the Bonchreſtien being without compari-

ſon

ſon by much the beſt of all Pears, as well by reaſon of its beauty, as becauſe it keeps longer than any other, you ought to plant in your Eſpalliers ſix times as many of them, as of any other kind.

9. As to what concerns Stone-fruits, beſides what ſhall be ſaid of them in their Catalogue, you are to obſerve the two ſame things in your choice of them. Apricots proſper no other way but in Eſpalliers only; but although their fruit be beautiful and very good, you are not notwithſtanding to plant many of them, for they bear in too great abundance, and continue but a very little while. As for Plumbs, they proſper very well in the open Air, and well enough reſiſt the froſts and winds, and therefore it would be to no purpoſe to uſurp the place of Eſpalliers for them, if not for the white and red Pordrigon only, which are the tenderеſt of all Plumbs, and of which the Fruit is alſo preferred before all the reſt. Peaches of all other Fruit-trees,

do moſt require all the advantages of an Eſpallier, that is to ſay, a very hot Sun, and a good ſhelter againſt the agitation of the winds, for which reaſon there are very few places where they can come to their perfection, unleſs they be clapt up cloſe to a Wall; wherefore as their fruit is of the beſt ſort, both for reliſh and beauty, ſo it ought to make up the greater and more principal part of your beſt Eſpalliers, if not an entire Eſpallier of themſelves. Thoſe therefore who have a great many Walls, would do well to make a whole Eſpallier of Peaches only, on that ſide where the Sun is moſt violent, which is the firſt of the two Poſitions obſerved in the foregoing Chapter, and plant the Pear-trees in the ſecond. And being that Peach-trees require a greater diſtance for the extention of their branches, one may with great eaſe, and very good ſucceſs, make an Eſpallier of Peaches and * Muſcats, of three foot high

* Muſcat Grapes.

high along by the Wall, which is the ordinary height of the ſtocks of Vines, and plant Peaches of three foot of the Stem, which will begin to extend their branches over the Muſcats; but then for this purpoſe you muſt chuſe Peach-trees raiſed from the ſtone, or that are grafted upon ſtocks of Almonds or Apricots, which are raiſed from the ſtone, and not upon Plumb-ſtocks, by reaſon that the roots of the Plumb-trees too much importune their neighbours, and run out ſo ſoon every way to ſeek for nouriſhment, as even to thruſt new ſprouts or ſuckers out of the ground, which would very much endamage the Muſcats growing near them.

10. *Such as are well acquainted* with the difference betwixt Pear-trees grafted upon Quinces, and thoſe which are grafted upon wild ſtocks, always chuſe the firſt for their Eſpalliers; for it is certain that the Pear-tree grafted upon a Quince-ſtock, Palliſado's much better, puts not out ſo much wood,

bears twenty times more fruit, and nouriſhes them incomparably larger and fairer, than that upon the wild ſtock; and moreover, the Trenches and improvements have been added to the earth in which they are planted, continues much longer with the Quinces, than the others, by reaſon they ſpread not their roots ſo far, and yet attract every whit as much nouriſhment, as appears by their putting out many more hairy ſuckers and fibers. It is true, that the Beure, the Orange-Pear, the Bezidery and the Portail, proſper as well upon the wild ſtock; but they are much better upon the Quince, though the Portail (to ſay the truth) is not ſo tart upon the wild ſtock, and has ordinarily a better taſt. As to what concerns the choice of Apple and Pear-Quinces, and their different natures, you are to conſult the Chapter of Pepin-fruits.

11. Pear-Quinces not yet grafted, are ſometimes planted in Eſpalliers to graft them afterwards upon the place, which

which is done the second year, in the Month of *August*, * *en œil dormant*, which is by the way of Inoculation.

which is the best way for Pear-Quinces, after the manner set down in the Chapter of Nurseries for Pepin-fruits. In case it be grafted after this manner, the Quince that is planted is not to be above an inch, or two inches higher than the earth, for as much as you are to set the *œil dormant* upon the first years shoot; and when you plant Trees already grafted, you must take good heed, that the Graft be always four fingers above the earth, lest the Tree should take root from the graft, by which means it would loose the advantages it receives from the root of the Quince, in having others of another quality, and such as would make it bear a great deal more wood than fruit; which Observation may also serve for all sorts of Trees grafted upon the Quince, and for Apple-trees grafted upon a stock of a Pepin, of the *Pomme-de-Paradis*, which are exceed-

ingly subject to take root from the Graft; wherefore, if the Trees have been planted too deep at first, so that the Graft be covered with earth, you must have a care at the time when you give them the greatest culture, in the beginning and at the end of Winter, to bare them, to see if they do not put forth some threds and little roots from the Graft, and if they have, always to cut them away.

12. Those who at first only plant Quinces afterward to graft upon, may deliver themselves from the impatience of expecting so long till their Walls were covered, and their Espalliers come to bear fruit, if in separating their Quinces fifteen foot from one another, which is the usual distance, they would plant a Peach between, which shoots much sooner, and presently furnishes the Wall, both with his leaves and fruit; by which means one may stay very well till the Pear-trees come to perfection, enjoying the Peaches in the mean time, and

by

by that time the other shall be arrived at their perfection, the Peach-trees, which are not so long-liv'd, will begin to decline, and in a few years easily yield them their whole room.

What is to be observed in cultivating Espalliers already planted.

1. THe principal care you ought to have the first year the Trees are planted, is that they take well below, and put out above with vigour; and therefore it is, that you are not so much to think of taking away their superfluous branches, as of guiding and conducting them in this beginning, and to preserve them from the great droughts and ardours of the Sun, from the grass that would choak them, and other things that often make them die in Summer, if not preserved by the Gardiners care. In case therefore that the Trees do not shoot with very

very great force and vigour, I would not meddle with their branches, if not gently, and without violence to ply and bend them towards the form they are afterwards to receive; as also, when you see their branches shoot straight up, and that they are lusty and liking shoots, you may sometimes stop their progress by nipping off the extremities with your nail only, to the end that they may fork out below, and put out to furnish the two sides: but generally speaking, you are to observe touching Espalliers, what has been said concerning tall Standards, in the third Article of that Chapter.

2. The chief care of him who cultivates an Espallier in this first year, after he has given it its due labour in the beginning of *March*, ought to be to defend it from dryness, which sometimes in that Month is very great, and to that degree, that the drought of *March* is oft-times more dangerous, than the heat of the whole Summer, by reason that the Trees are not at that

that time yet enough eſtabliſht in the earth; and therefore are by ſo much the more obnoxious to the accidents contrary to them, by how much they are of leſs power to reſiſt them. The remedy of which is, to put about the Tree, for four foot, or thereabouts, half a foot thickneſs of dung not yet ſufficiently conſumed, upon the new-ſtirred earth; which covering will keep the earth in the ſame condition it finds it, and defends it well from the drought: but in caſe you may not have dung enough to cover all your Trees, you may lay heaps of graſs and weeds; but then they muſt have no roots, leſt they ſhould take hold of the earth; or for need you may alſo ſupply that defect with Hay, and in the Month of *June* there is nothing better for this purpoſe, and to keep the great heat of the Sun from overdrying and parching the earth, than to lay Fearn, that is yet green, and not much withered; a covering that does very much defend the earth, both from this dryneſs,

dryneſs, as alſo to keep it ſupple, and to hinder it from waſhing away, if there ſhould happen any violent rain. The dung does however more befriend the Soyl, in that its ſaltneſs and fat ſtill ſinks into the earth, eſpecially when the rains fall, and makes it ſtill more and more fertile.

3. As to the ſeveral labours that are neceſſary for the proſperity of your Plantation, all Trees, whether newly planted, or of older ſtanding, require at leaſt four every year. *The firſt* at the end of Winter, that is to ſay, in the beginning of *March*, which ought to be very deep; the ſecond in *May*, after a little rain, which is not to be deep, and wherein half a Spades depth is enough only to kill the graſs, and by a little ſtirring the ſurface of the ground, to hinder that the heat of the Sun and dryneſs do not too much cruſt and bind it; the third in *July*, after the ſame manner, and for the ſame reaſons; and the fourth in *October*, and then you are to dive as deep into the earth

earth as you can, as you may see in the 26th. Article of Standards. In case the earth shall put out grass in great abundance (as it oft falls out in that which is prepared after the manner required for Espalliers) you are then to take it away by giving it a little labour, which shall only, as it were, scratch the earth so oft as the grass shall begin to appear; for above all things you must take good heed, that the fat of the earth does not spread it self in unprofitable productions, that it may be wholly preserved for the nourishment of the Trees and their Fruits.

4. You are the second year to begin to bend your Trees well to their right posture, and to prune them in such sort, that no superfluous branches may remain, and that all those that are to be spared from the Knife be laid into good order.

5. Pallisado's are made three ways, either with Poles set Lattice-wise along by the Walls, or by fastning the branches

branches to the Wall with leather and nails, or by fixing Sheep-ſhancks in the Walls, and afterwards faſtning the branches to them.

6. Of theſe the firſt way is the moſt antient, and the only one that was in uſe at firſt; which to make ſuch as they ought to be, the Poles are to be tyed very faſt together, and the openings of the Lattices no more than half a foot ſquare at moſt, and there muſt be hooks in the Wall from four foot to four foot, and three inches out, of which there are to be three ranks in the height of ten or twelve foot, to ſuſtain and ſuſpend the Poles in the Air, ſo that none of them may enter into the earth, or at leaſt very few; for thus they will continue much longer, which is a thing to be deſired, not only for the ſaving of expence, but alſo becauſe it is very hard to put new Poles or other pieces of wood into an Eſpallier, without the Trees running a hazard of being broken, or very much incommodated. You are to chuſe your

your Poles for this purpose, of Chestnut, or of Elm, which also are to be pill'd, and without any Bark; and it would moreover be very good to lay them a long time in water before you use them, for Elm, especially, grows very hard after having been seasoned in water, and lasts much longer: you may also make use of Sallows, and all other sorts of wood, provided the Poles be very straight. Great laths of Oak painted green, and fastned with Wire, are likewise sometimes made use of in this kind of Work.

7. The second way, which is done with leathers and nails, is more proper, because it is not at all discerned when the Tree is again covered with his leaves; and moreover, one may by this means more easily place the branches exactly as he desires; but this cannot be made use of but upon Walls that are shot over with plaister, for as much as otherwise the nails cannot hold; and moreover, it costs thrice the time the others do, and therefore

is by no means proper for thoſe who have a great many Eſpalliers to order.

8. The third way, which is done with Sheep-ſhancks faſtned in the Walls, is doubtleſs the beſt and moſt commodious of all, and that which is done with leaſt charge; but the bones muſt be ſet ſo near together, as not to be above four or five inches from one another, to the end that they may every where be met with, where a branch is to be tyed, otherwiſe the Trees can never be laid in any tolerable order. Theſe ought to be placed in the Wall, in the order of Quincunx, and ſet ſo far in withal, that they may not ſtand out above an inch, or very little more, which is ſufficient to faſten a Branch to, with an Ozier, a Withy, a Bull-ruſh, or Spaniſh Broom; and it were to be wiſht that they were placed in building the Walls, for they can never be ſo rightly placed, when they are already built. There are, who inſtead of theſe bones, make uſe of

little ſticks of Dog-tree, or heart of Oak; but the bones are much better, ſmoother, and more commodious, and coſt leſs than all the reſt.

9. You are to raiſe the Trees you palliſado, after the Figure of an expanded hand, or of a Fan ſpread out to the utmoſt, ſo that the middle branch be always higher than the reſt; and that ought never to be bowed, but to be ſtopt in its ſpeed at the top, when it aſpires too high, for fear, leſt in drawing too much nouriſhment, the Tree ſhould want it below, and not put out branches enough to furniſh the ſides; after which you muſt draw out, and ſpread the branches in ſuch ſort, that the extremities be always ty'd higher than the place where they part from the Tree; that is to ſay, you are never to bow them downward; for naturally all Trees tend upward, and ſhoot their branches that way, ſo that if you ſhould force them to return towards the earth, that contrariety would exceedingly hurt them. You

are alſo to take heed, that the middle of the branch be not bowed in ſuch ſort, that the two extremities be loweſt, and by no means ſuffer the branches to croſs, or be laid over one another, which is commonly ſeen in Eſpalliers that are not very carefully lookt to; and in the mean time, it is impoſſible the Trees ſhould proſper, when put into ſo incommodious a poſture. The branch is therefore to be extended in a right line, from the Stem where it comes out, to its utmoſt extremity, ſtill mounting a little upward, but very little; for if it were carried up too ſtraight, the bottom of the Tree would be wholly diſfurniſht, and diſſpoyled of its due ornament and proportion.

10. You muſt begin to palliſado the lower branches, within half a foot of the earth, and ſo continue them up to the top; and to the end that the Tree may furniſh it ſelf in the lower parts, and ſhoot forth branches on either ſide, you ought to ſtop the extremities of the

the Graft in pinching them with your nails, so soon as it shall be shot up two or three inches high, as shall be better explained, when we come to speak of Pepin-fruits.

11. Rightly to understand how to raise a Tree, you are necessarily to know how it is to be cut, and in that principally does consist the care that is to be taken about Espalliers. To which end you are to consult the 30th. Article of the Chapter of Standards; for although the pruning of those, and of Espalliers, are very different in many things, they have nevertheless some relation, and the Gardiner, who knows what Figure his Tree ought to bear, knows also very near, what branches ought to be taken away. In the first place, you are never to suffer any branch on the back-side of the Tree, that is to say, betwixt the Wall and it, nor on the fore-part neither, but on the two sides only. Secondly, you must take away, or stop all the branches that shoot out in length, without putting

out on the sides, and that are not sufficiently furnisht with leaves, and little sprigs in their extention; for otherwise it will fall out, that the middle of the Tree will be in a manner naked, and cannot recloath it self with leaves or fruit. Which Rule is to be observed for all sorts of Trees, but principally Peaches; as to which, if this particular care be not taken, you will presently see neither fruit nor leaf, but at the extremities of the branches only.

12. The principal pruning of Trees ought to be in the decrease of the Moon in *January* and *February*; and if the Trees be weak, you are always to stay till the decrease of *February*, lest the cold should pierce into the wounds after they are cut; nay, it is oft-times better to stay till the decrease of *March*; for the cutting of the Tree it imports not, though it were already in the blossom.

13. In this Season you are to take away all the superfluous branches that would deface the Figure of the Tree,

stop

ſtop the good that ſhoot out too far, and prune away all the ill wood which was of the *Auguſt*-ſhoot, that never bears fruit, and does only burthen and incommodate the Tree, becauſe it has not had heat to mature it, and (according to the Gardiners phraſe) is not ſufficiently Auguſted. In a word, to ſpeak properly, there is only this one Seaſon for pruning, for as much as during the reſt of the year, we never cut off any branches, but only ſtop and hinder them from ſhooting irregularly and to ill effect.

14. In pruning you are evermore to ſpare thoſe Branches which are neareſt to bearing, which after you have been a while uſed to Trees, will eaſily be diſtinguiſht from others. Thoſe who covet to have long fruits, ought to conſider the little branches which are ſhort and well-liking, and full knotted with Bloſſoms, and that grow neareſt to the Bole of the Tree, as fitteſt to gratifie their deſire; of which knots or buttons, they muſt alſo nip off ſo

many, as to leave no more than one or two only, and also be careful that there still remain some knots for leaves over, and at the extremity of the little cut branches, to the end that they may make a little tuft of leaves to defend the fruit it is to bear, from the heat of the Sun, and also the branch from withering. This little cutting so made, will cause the sap which would otherwise have disperst it self to the nourishment of a great many buttons, to bestow its vertue upon those only which remain: but you are yet to take notice, that as commonly there are several blossoms in every knot or button, so also there remain several Pears; wherefore to have them very large and fair, you are again to take away the greater number, and leave no more than one or two at most.

15. Notwithstanding, that you have pruned your Trees in the forenamed Season, you are nevertheless yet to take care to stop them in the decrease of *May* and *June* (for the decrease

creaſe of the Moon is evermore to be obſerved in this Work) which is to be done, to the end that the Tree may fork into ſeveral little branches and ſprays, and to hinder it from disfurniſhing it ſelf; which beſides that, it preſerves the ornament and beauty of a Tree, does alſo very much contribute to the liberal bearing thereof, for thoſe little branches commonly are they which are moſt charged with fruit. Peaches and Apricots require to be often poll'd, even every decreaſe of the Moon during the Summer, and ſo long as the ſap is in them, and that they ſhoot; for you are to have an eſpecial care no more to touch the Trees before Winter when their ſap is ſtaid, or that they have not much remaining in them, for as much as they then can never again cover the wound they have received, but the injuries of the Seaſon, and the Winters piercing cold would mortifie the part in ſuch ſort, that you will ſoon after be compelled to cut off the whole branch.

Pear-trees grafted upon wild ſtocks and not upon Quinces, require as frequent dreſſing, as either Apricots or Pears, otherwiſe they ſhoot all into wood, and bear no fruit at all.

16. The abundance which every one covets in all things, is exceedingly hurtful to Eſpalliers, for as much as it is naturally too uſual and over-exceſſive in theſe kind of Trees, if good heed be not taken to prevent their over-bearing; wherefore, the Trees will neither long be preſerved, nor fair and large fruit gathered from them, if care be not taken to take away a great number ſo ſoon as they are knotted, and before they have taken much nouriſhment from the Tree; and you are ever to leave ſome fewer than it is able to maintain, that it may not find it ſelf oppreſt, and may not diſperſe and waſt its force in this production. This Rule ought chiefly to be obſerved for Trees that bear long fruits, as the Bonchreſtien, and the Bergamot; but you are to make choice of the fruits you take

take away, and of those you leave you are never to suffer any at the extremities of the branches, not so much as a blossom, for they never prosper in that part; and yet though they cannot arrive at their just greatness and perfection, they nevertheless totally drain the whole branch, and hinder it from thriving; you are therefore also to leave the fruit the neareſt to the thick branches, and to the trunk of the Tree.

17. When you disburden a Tree from an over-abundance of fruit, you are not to tear them, or pull them off with your hand, by reason that in so doing you would lay open the branch in those parts where the stalks of the fruits are fastned, and so cause the sap to evaporate, which often makes the neighbouring fruits to wither, or at least hinders them from thriving to their just growth; but you are to cut the stalk as far off from the Tree as you can, which may be most commodiously done with a pair of sissers.

18. These

18. These observations principally serve for Pear-trees, nevertheless Peach-trees do also require to be discharged of part of their fruits, that the remainder may come to greater perfection, and that the Tree may longer endure.

19. You are never to spare dung, nor any of the other helps and improvements which are necessary for well enriching the Soyl wherein you intend to plant Fruit-trees, it being to be wisht that it were in such a condition at first, that it may stand in no more need of their help when the Trees come to bear, it being impossible but that the mixture of this strange body, must of necessity evermore give some ill relish to the fruits, or at least take away something from the good savour of the earth, and render them more wallowish and faint: but when the dung is well consumed, both by time, and by frequent labouring and stirring, it assumes it self the same quality of earth, leaving only its salt and fatness,

nefs, fo that the natural excellency of the fruit receives no manner of diminution; wherefore you are to have a great care to preferve this fatnefs, and not fuffer it to be fquandered away in unprofitable productions, that you may not afterward be obliged to renew your improvement. To which end you are never to fow good herbs, nor fuffer ill ones to grow near your Trees, but are always to weed them up, that the earth may only labour for them, by which means it will not be neceffary of a long time to fupply them with any more dung, the earth being once well enricht, if it be not of it felf fo burning, as in a fhort time to confume all thefe improvements; for when you perceive that it no longer retains its vertue, that the fruits dwindle from their ordinary largenefs, and that the Trees vifibly languifh from their ufual vigour, it will then be neceffary again to fupply it with new helps.

20. When you perceive a Tree to languifh, that the leaves turn yellowifh,

ish, and no more retain their natural and usual verdure, it is good in the beginning of Winter, after having well stirred the earth, to lay Pigeons dung, two or three fingers thick upon the earth, and four foot compass about it, and so let it lye all Winter there to spread its force and too great heat, and afterward in labouring the Tree when the cold season is past, to turn it into the earth, which will restore it to its former vigour. It is also very good to apply a great quantity of Swines dung, but for that itis presently to be buried in the ground, and you are not to leave it on the top, for as much as it is not too hot, but on the contrary, the coldest of all other improvements. In turning up the earth, you will often find some parts of the root of the Tree diseased and decaying, which with the pruning-knife is neatly to be cut, to make it thrust out new fibers, and so to recover new strength, in which case you are to cover the root anew, with good fat soyl well consumed,

ſumed, and old dung well mixt with mould, and take heed not too much to bare the root of the Tree, or lay it too open, leſt intending to relieve, you totally deſtroy it.

Of Eſpalliers in the open Air, called Hay-d'appuy.

ALl that has been directed for the raiſing Eſpalliers againſt Walls, may alſo be indifferently obſerved in Eſpalliers in the open Air, for they require the ſame preparation of the earth, the ſame manner of planting, the ſame way of cutting, and the ſame extention of their branches. They have not indeed the advantage of the Wall the others have, which by repercuſſion very much augments the heat of the Sun, and by its ſhelter ſecures them from the violence of the winds; but if they are not ſo well skreen'd as the firſt, they

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are yet in much greater ſecurity than the Standards, and even than the Dwarf-trees and Shrubs, for as much as the Poles to which they are faſtned, keep them firm from being ſhaken with the wind; for which reaſon, the large fruits they bear ſtand in greater ſecurity, than in other Trees; and moreover, this kind of Plantation being ordinarily ſet over againſt the Eſpalliers, which are planted againſt the Walls, to make an Alley betwixt them (and for that reaſon called a Contre-Eſpallier) they ſtill in ſome meaſure participate of the advantages thoſe enjoy which are planted by the Walls, and therefore delicate fruits ſucceed very well in this poſture, the Bergamot excepted, and ſome of the tender Pavies, which conſtantly require to be planted againſt a Wall. This ſort of Palliſado is not to be made but with Poles, and that after the manner ſet down in the ſixth Article of Eſpalliers. In planting this ſort of Trees, whether Stone, or Pepin-fruits,

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the same distance is to be observed with Espalliers against Walls; and for what concerns Pear-trees, it is much better to plant those grafted upon Quinces, than any other.

Of Shrubs or Dwarf-Trees.

THis sort of Trees costs much less than the two former, and yet the fruits nevertheless fail not to prosper very well, some of the more delicate and tender Trees only excepted.

Pear-trees succeed very easily this way, if grafted upon Quinces, and not otherwise, the others being hard to be made submit to this little stature, by reason they thrust out so much wood, and the more you cut them, the more they put out, and besides, naturally aspiring to be tall; they never bear fruit to purpose, if depress and subdu'd to another Figure. They are to be prun'd in the same season with the Espalliers, their form ought to be round,

round, you must take from them the branches that cross one another, not leave them too much wood; take heed that the branches do not shade one another, and that they are not too thick, especially within of the Tree, which is evermore to be discharged of wood, forasmuch as it is useless in that part, and never bears any fruit. The Pear-trees of this sort ought to be planted at the distance of twelve, or at least ten foot from one another; they may be planted in the Contre-Espalliers instead of Pallisado's, or you may make entire Plantations of them, being set in the Quincunx order, at the forenamed distance. Apricots are by no means to be planted after this manner, by reason that, besides, they will not have sufficient security from the winds, their Trees will not be subjected to this Figure. Peaches do better this way, and yet they extend themselves too far, and put out such abundance of wood, that it is much better to leave them to their natural liberty

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in Climates where they can prosper in the open Air.

Cherries and Plumb-trees are very beautiful, and bear exceeding well in Dwarf-trees; but you must then set them at six yards distance from one another, for as much as they stretch out their branches very far, and so far extend their heads, that they bow back again towards the earth, as if they were raised in tall Standards.

The Plumb-tree is much more patient of the knife, and suffers his superfluous wood to be taken from him, much more willingly than the Cherry, from which nevertheless it is also requisite to prune away a little in the middle of the Tree when it is too thick; and to bring it into this Figure, you must stop the Grafts betimes, so soon as they have shot three or four inches, and make them turn down again towards the ground. The Cherry-tree will not be so often cut as the Plumb, and it is sufficient to take away his superfluous wood from the middle

of the Tree only, when you perceive it to be too thick. Apple-trees do alſo very well in buſhes, when grafted upon a ſtock of Paradice; but thoſe which are grafted upon ordinary crab-ſtocks will be raiſed in Standards, and come to be great Trees; but thoſe which are grafted upon the Paradice-ſtock, put out very little wood, and nevertheleſs bear plentifully well; theſe are to be planted at two yards, or at the moſt, at ſeven foot diſtance only from one another, if you will make the beſt uſe of your ground, for they require no greater extent than that little ſpace will allow; they will hardly endure to be cut at all, neither do they need, for as much as they put forth no more wood than is neceſſary for their bearing.

As to all the reſt, that is to ſay, for what concerns planting, labouring and cultivating Dwarf-trees, you are to obſerve the ſame Rules, or very near, that you do for your Eſpalliers.

Of

Of Compoſts.

OVer and above the foregoing Obſervations, in the Chapters for the Manuring of Trees, and for diſtinguiſhing the Soyls wherein they are planted, it will not be amiſs to obſerve ſomething in general touching the nature of Compoſts in their different qualities.

Cow-dung then well rotten, is of all others the beſt for Trees, both becauſe it continues longer than any other, and alſo by reaſon that it is not too hot; and therefore is to be turned into the earth in labouring the ground at the beginning of Winter.

Sheeps-dung is hotter, and therefore not ſo proper for dry and burning Soyls, if not firſt very well conſum'd, but then may be turned into the ground at the ſame Seaſon.

Horſe-dung is yet hotter than the other, and not very proper for any

but moist places, and in such Soyls it is of all other the best; 'tis true, that when it is very well wasted and decayed, it may be used in all places, and put to all uses; but, generally speaking, it is much more proper for potherbs and for Pulses, that is, all sorts of Pease and Beans, than for Trees; and is best to be laid upon the earth in the beginning of Winter, that the rains and frosts may perish it, and make it lose its too great heat; after which, when you give your Trees the first Husbandry in the Spring, you may turn it in.

Swines-dung is of all other the coolest, and consequently very proper for Trees, especially in a burning Soyl. It ought ever to be turned in at first, and not to be laid upon the earth, and not being too hot, may as well be made use of in the Spring, as the beginning of Winter.

Pigeon-dung is the most violent and hot of all, but its ardour being once extinct, does wonders in reviving the vi-

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gour of a Tree, & helping it to put forth large and well-coloured leaves; but it is never to be turned into the earth, till first it has been long exposed to the frost and rain; and to do well, you should always spread it upon the earth in the beginning of Winter, and not turn it in till the Spring; but as its effect is prompt and sudden, so its vertue is but of short duration; for no dung whatever so soon spends it self in the earth as this; and when you have used it with all the Art you can, in a year or two the Soyl will be as poor as before, and receive no manner of advantage by it.

Of Creatures that infest Trees and Fruits, as also sundry accidents that are hurtful to them.

1. IT is not enough to set a Tree in a good place, and to husband and cultivate it well when it is planted;

but you must also preserve it from several accidents to which it is subject, and defend it from a thousand little enemies that attack it. Caterpillars, Locusts, Cantarides, Ants, and a number of other sorts of little animals, denounce open War against your Trees, with innumerable armes without, and Moles, field-mice, & certain litle white worms that eat the roots, persecute them within the earth. Nay, there are certain little worms that breed in the very substance of the very Tree it self, and in the most vital part of it, which is betwixt the wood and the bark, which cause the branches to wither, and by little and little, if not lookt unto, will totally destroy it. The Rats and the Wasps will also make profit of their Spoyls, and in a short space devour and corrupt the fruits for which the Gardiner has laboured the whole year about. Take here then the remedies which are to be used against all these different sorts of Vermine.

2. As to Caterpillars, you are to have

have an especial care during the winter season, to take away all the Kells, or web-like receptacles that hang upon the Trees, wherein the seed of this pernitious vermine is concealed; in doing of which, it will not be enough to cleanse the fruit-trees only, and those that chiefly require the Gardiners most particular care; but you are moreover to cut all the hedges, and the branches of the other Trees that grow within three or four hundred yards round about, the vicinity whereof would otherwise infallibly within a little space, infect your more pretious plants with this fatal pestilence, so soon as the vermine should come to discloſe. You are also to take care to burn all those Kells, it being not sufficient to cleanse them from the Trees, and still to leave them upon the ground, where they would breed as well as upon the Trees themselves. Of these there is a certain sort, that breed in little rings, which wrap themselves about the smaller branches of the

Trees, and are by so much the harder to take away, by how much they are almost invisible till they are discloſed, and then it is that you are to dispatch them as well as the others, that are immediately engendred by the impreſſion of the Air, when the evening and morning cold makes them to knit and crowd together. To remedy which, 'tis ſaid, that if you bind a Tree with green Rye, or tye the branches of Elder or Dane-wort amongſt thoſe of the Tree, the Caterpillars will not come near it. Some alſo ſprinkle the branches and leaves of the Tree with water, wherein ſalt-peter has been infuſed, or the juice of bruiſed Rue to kill this ſort of Vermine.

3. Touching Locuſts, if you have not the patience to wait for the firſt great rain that ſhall fall, you need do no more but ſhake the Trees only to which they cling, to make them fall off, and you may then cruſh them to pieces.

4. Cantharides may be deſtroyed after

after the same manner, or otherwise by sprinkling the Trees with water, wherein Sage or Rue have been boyled, after it is cold, which will kill them. 'Tis also said, that Rose-trees secure their neighbours from this sort of Vermine, and that they will never come into a Pallisado where they are planted.

5. As for Ants, saw-dust powdered and strewed about the Tree they spoil by their frequentation, totally hinders their access, by reason that these little Creatures dare not pass over the powder they feel stir under them. Also a pretty broad circle of pit-coal ashes drawn round the Tree, does the same thing, by reason they can have no footing, by which to come to climb the Tree so fenced about; a circumference of Glue or Bird-lime, does also keep them off.

6. For what concerns Moles and field-mice, the Gardiner must be careful to take them with certain traps made for that purpose. 'Tis also said,

that

that a certain Simple called *Horti palma*, has the property to chase away the Moles from all places where it is planted.

7. The branches of Ground-Elder fresh gathered, and mixt with those of the Tree, also hinder Rats from coming near them.

Of Nurseries.

1. SUch as are curious in planting, ought betimes to take care to raise great and spatious Nurseries of all sorts of fruits, for as much as one is much more assured of the vigour of Trees, and the rightness of the sorts he desires, when he has them of his own raising, than when he is constrained to look out for them in other places; and besides, it is much better to be in a condition to supply others who stand in need, than to be obliged to buy for ones own use.

2. Nurseries seem to be chiefly proper

per for Pepin-fruits, from whence the word *Pepiniere*, a *Nurſery*, derives it ſelf; nevertheleſs, under this denomination is comprehended all ſorts of Plantations of young Trees, after what manner ſoever raiſed, to be tranſplanted afterwards into other places.

3. To make a good Nurſery of Apple-trees and Pear-trees, you are to make choice of a light and eaſie Soyl, to the end that the roots may with greater facility penetrate into it, and put out a great number of hairy fibers. You are then to make little rigots or trenches of a Spades graft only, and three foot diſtance from one another, and there in *November*, and a fair Seaſon, plant your little Pear, and Apple plants, which you are to chuſe well of the moſt kindly and hopeful ſhoots, and of no more than one, or two years growth at moſt, and plant them at ſeven or eight inches diſtance from one another in the Trenches, and take heed withal not to ſet them deeper in the earth, than they were before in the place

place from whence they were drawn, to cut off half of the roots in planting them, and not to meddle with the tops till after Winter; and after you have well supplied the roots with small and light mould, and filled up the trenches, you are to bank them up handsomly with earth in their rows or ranks, so that the Plant be scarcely seen; and after Winter is past, when they begin to put out in *April*, you must cleanse them with your fingers, so as to leave no more than one Burgeon, or upright shoot only.

4. About three weeks before *Midsummer*, when Fearn is yet tender, it is very good to lay it green and fresh got about the ranks or rows, at the same time you have laboured them, to preserve the freshness of the earth, and to hinder the heat of the Sun from incommodating those little Trees, that have not yet strength to defend themselves; but then in the labour you bestow upon them, you must be careful not to touch the roots; it

will

will therefore be ſufficient to ſtir the earth half a Spades graft near unto the rows, provided you give them in the middle their due and uſual depth. When Winter ſhall be come, you ſhould bury this Fearn in the middle of the Trenches or Gutters, to the end it there may rot and bare the Trees, by taking away part of the earth by which they had been ſhouldered and moulded up; yet ſo, nevertheleſs, that there ſtill remain ſomething above the ordinary level of the Plot, to defend the Trees from the froſts of the Seaſon.

5. You muſt the Spring following take the firſt fair weather in *March* to labour this Nurſery, and in labouring it, the Gardiner is with his Spade to chop and mince the Fearn that was buried in the beginning of Winter, and that will then be half rotten; with which, mixt with earth, he ſhall again bank up the Trees after the ſame manner he did with ſimple earth at the planting of them, and is to continue

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ſo to do three or four years ſucceſſively, till the Trees ſhall be grown of ſufficient ſtrength to be grafted.

6. As the Plant increaſes in growth, you are ſtill to cleanſe it from all the little branches it ſhoots forth for half a foot above the earth, to keep that part clean, where the graft is to be placed; but you are to cut nothing higher than that, nor by any means the ſtock, that being to no purpoſe at all, for as much as it imports not after what manner the wood grows that is to be cut off, when the Tree ſhall come to be grafted; and it would mightily hinder its growth, by reaſon that the ſap evaporates by the wounds you make in cutting the little branches, and the ſubſtance of the Trees as yet but ſmall and weak, inſtead of preſerving and fortifying it ſelf, waſts and conſumes away to nothing.

7. If your Pepin-ſtocks are planted in a good Soyl, and husbanded after this manner, they will in the fourth year be ready to be grafted, and then you

you muſt obſerve to put but one graft upon a ſtock, how thick ſoever it may be; which graft ought alſo to be proportioned to the thickneſs of the ſtock, and be choſen bigger or leſs, according to the ſtrength of the other.

8. You are to cut the ſtocks you graft upon in the form of a Hinds-foot, for as much as after this ſort the Tree is more apt to bark over again, and does much ſooner cover the wound.

9. You are ever to obſerve to place the backſide of the cut towards the South, that the Sun may not dart plum down upon it, and cauſe it to rift or chop; for which reaſon alſo you are to take good heed, that the clay you put upon it be ſo well tempered, as not to crack off, and leave the part where it is grafted open, and naked. A Maxim which is alſo to be obſerved in all ſorts of Trees whatever that you cut.

10. The graff in cleft being the beſt and the moſt uſual for Standards, we

do

do not commonly think of any other for these sort of Nurseries; not that inoculating is not very good, especially for Pear-trees, but it is more proper for Stone-fruits and Quinces, than for Apples and Pears upon Pepin-stocks; and Apple-trees come on very slowly when grafted after this manner.

11. There is hardly any Season in the year wherein you may not graft; for all Summer long, and in *Autumn* you may inoculate, and in Winter you may graft after the ordinary way; nevertheless, the best and most certain Season for this sort of grafting is in *March*, and then in the decrease of the Moon: but for gathering your grafts, you may indifferently do it, either in the wain, or the increase.

12. You are ever to cull your grafts from well-liking Trees, and that are in their year of bearing; that is to say, that are well knotted with blossoms; for the Tree you graft will evermore retain the estate and condition in which

which the Tree was, from which he derives his graff, at the time it was taken from it, and will commonly bear exceedingly well, if the Tree (which imparts its whole nature to it) was then well set with fruit; as on the contrary, it will remain barren, and very rarely bear any fruit, if the Mother-Tree was then in her year of repose.

13. When the graff begins to put out, you are to clean it with your fingers, so that only one sprout remain, to the end it may not fork, and that the entire vigour of the Tree may go to maintain the branch you would preserve; but after that, you are no more either to cleanse, or cut any thing from the Tree, what branches or sprouts soever it may put out, till the third year; and then you are not only to take away the unprofitable ones, but moreover, form the Tree into the Figure wherein it ought to be, which is chiefly to be understood for Trees that you raise in Standards.

14. In your Nurseries your Apple-

trees ought to be separated from your Pear-trees, and to observe an exact *decorum* indeed; your different fruits ought to be distinguisht by the several ranks or ranges of Trees. In the following Chapter, I intend to speak of the several sorts of fruits, together with the manner of chusing and disposing of them.

15. You may also graft after the same manner, observing the same rules, Apples of all sorts, upon little Apples of Paradice for Dwarf-trees, which prosper exceeding well, and prove very great bearers; but as this sort of stock shoots out but very little wood, if those you shall plant in your Nurseries be of any thickness, you are not to meddle with pruning the root, and are to preserve half a foot, or thereabout, of the Bole, to the end, that when it shall sprout, you may place the graft upon the old stock; for if you should be obliged to expect till the new wood it shall put out be of sufficient thickness to bear a graft, it would too much

much ſtretch your patience, and defer your Plantation too long. You are alſo to be careful not to graft too low, leſt the Tree (which Apple-trees are very ſubject to) ſhould take root above the graft, which, ſhould it ſo fall out, it would no more be a Dwarf-tree, but would aſſume the nature and form of an ordinary Apple.

16. All the ſame Rules are alſo to be obſerved for Apricots, Plumbs, Peaches and Cherry-Trees, when you graft them in cleft to raiſe tall Trees, excepting that you are to take notice to graft them ſooner, and in the decreaſe of the Moon in *January* or *February*. It is very true, that moſt of the forenamed fruits (eſpecially Peaches) delight more in inoculation; but in caſe you purpoſe to extend them into Eſpalliers, or to plant them in Shrubs, you are then to obſerve the Rules already preſcribed for Pear-trees deſigned for thoſe Figures.

17. Grafting or inoculating in Eſcutcheon, is proper for all Stone-fruits,

but in truth, leſs for the Cherry, than any other, by reaſon that they uſually ſpew out much Gum from the part which is opened to receive the ſhield, which very often ſuffocates the eye or bud, from putting out in the Spring; for which reaſon it is much better to inoculate Cherries in the decreaſe of *May* or *June*, for as much as the Eſcutcheon put in at thoſe Seaſons, immediately ſprouts upon the inoculation. You may alſo make uſe of this way of grafting for other fruits, but not with ſo certain ſucceſs; and in ſo doing, you are always to cut the ſtock at the ſame time you inoculate. Such as chuſe to graft after this manner, are evermore to take heed never to place two graffs over againſt one another, on both ſides the Tree, by reaſon that one cannot afterwards conveniently come to cut away the ſuperfluous part of the ſtock, when the grafts have taken and made their ſhoots, ſo that there would ſtill remain a part of the old wood betwixt them; wherefore you are always

ways to place the grafts in such sort, that the one be always higher, and the other lower.

18. When you have inoculated a Tree, you are not by any means to cut away any thing of the stock above, till the Winter be past, and when in the Spring the eye of the graft shall begin to sprout, you are then to cut off the stock two or three inches above, but no nearer, for fear of killing the graft, for want of sap to nourish it; and the following year, when the graft shall have well retaken, you may cut away the stock close by the shield.

19. Inoculation is evermore to be performed, or in the decrease of *July*, or sometimes in *June*, if it be pretty well advanc'd into the following Month of *July*; for you are always to inoculate at these times, or else in the end of *July*, or in the beginning of *August*.

20. If you shall perceive that the eye of the Escutcheon will put out before Winter, you may check it by

early slackning the ligature of the Escutcheon or shield.

21. For ligament, Cotton, or Woollen thread is much better than that of Hemp or Flax, both by reason it doth not press so hard upon, nor so eat into the bark, and that it stretches and gives way as the branch swells and encreases.

22. Cherry-trees grafted in cleft prosper exceedingly well, as also in Escutcheon, if inoculated at *Midsummer* upon the red Merisier; for the Black-cherry is not so well stored with sap, and they prosper better after this manner, than if planted upon old rooted stocks, especially if you would raise them in Standards, which has also the same effect in Bigarotiers and Griotiers; only when you design them for Dwarf-trees, you are to take notice to graft them very low, and to check the graft so soon as ever it shall begin to put out, to the end that it may spread into branches, and the Tree may form his head from below.

23. Apri-

23. Apricots are usually grafted upon stocks of their own kind, raised from the Stone, as also upon Plumbs, Peaches and Almonds, and prosper well upon them all. 'Tis said, that they will also take upon the Mulberry, and that they are not subject to frost being so grafted, that sort of Tree being naturally exceeding slow, and not enclined to put out till after the frosty Season; but it is hard to believe that two so different saps can ever agree and mix together, and several who have tryed the experiment have lost their labour.

24. The Peach desires to be grafted upon a Plumb, a Peach raised from the Stone, an Almond, or an Apricot, and chiefly delights in Inoculation. You may also raise very good Peaches from the Stone, and there are certain sorts, as the Peaches of *Pau*, and several others that succeed every whit as well, and bear as good fruit from the stone as by grafting. Those grafted upon a Plumb, prosper marvellously well; but

the root of the Plumb-ſtock is a very ill neighbour, both by reaſon that it devours too much ground, and alſo ſhoots forth ſuckers on every ſide; but Trees ſo grafted, continue longer than on a Peach. As to thoſe that are inoculated upon an Almond, they continue alſo very long, and in a ſandy Soyl are much better than any other; but they very unwillingly retake when tranſplanted: for which reaſon it is much better to ſow the Almonds in the ſtations themſelves you deſign for the conſtant ſtanding of your fruit, and afterwards to graft them upon the place, then to ſow them in Nurſeries for future tranſplantation. Such as are grafted upon other Peaches, do yet bear longer and better fruit than any other, becauſe being of the ſame nature, they more eaſily unite, and better agree together; but they are much ſhorter liv'd than any of the reſt. The Apricot ſtock is alſo very proper for a Peach, eſpecially for early Peaches; and yet they are ſometimes ſubject to

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ſpue out Gum, as well as the Cherry, when inoculated, though that does but rarely fall out.

25. Plumbs are ordinarily grafted upon ſtocks of their own, unleſs you deſign to plant them near other Trees; and then to avoid the inconvenience of their putting out too many ſuckers from their roots, you may graft them upon Apricots or Almonds raiſed from the Stone.

26. Apricots are grafted, either upon other Apricots raiſed from the Stone, or upon Plumbs, and ſometimes even upon Peaches and Almonds.

27. You muſt note, that your black Damſon-Plumb, and that of St. *Julian*, are incomparably better than all others to graft upon, and ſuch as are curious in their Plantations, will never ſtore their Nurſeries with any other, where thoſe two ſorts are to be had.

28. The diſtances before ſet down for Plants in Nurſeries, are proper for thoſe Trees you deſign for Standards, and for ſuch as you intend for Eſpal-

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liers and Dwarf-Trees, the same distance betwixt the rows and ranks may be indifferently observed; but in the order of the ranks themselves this difference is to be noted, that the latter must always be planted at two foot distance the one from the other, whereas for those you design for Standards, six or eight inches will suffice. The reason of which is, that you are betimes, and at first, to extend the Trees you intend for Shrubs and Espalliers, into their destined Figure, whereas, if they were crowded and shouldered in the Nursery, they would shoot upward, instead of spreading into the other form. A Rule, that may indifferently serve for both Stone and Pepin-fruits, according to the office for which they are designed.

29. Pear-trees destined for Espalliers or Bushes, are ordinarily grafted, either upon Wildings raised from the Pepin, or upon Quinces; as to the first of which, you may indifferently either graft or inoculate; but for the

Quinces,

Quinces, they prosper infinitely better being inoculated; and being grafted in cleft, do very hardly recover.

30. Quince-stocks are much more proper for all sorts of Dwarf-pears and Espalliers, than the Wildings, by reason that they naturally encline to that Figure, whereas the other are evermore aspiring, and must be eternally cut and slasht, to subdue and correct them; and experience has made it plain, that Pears grafted upon Quinces, bear much more and fairer fruit, and are more easily perswaded into the Figure for which they were designed, than the others, which are apt to spend themselves into wood. It is true, that at the first bearing, the fruit that comes from the Quince-stock, does often retain a smatch of its kind, especially in a stiff sturdy Soyl; but that is soon gone, and the two or three first years so carry it off, that there afterwards remains no difference in the tast. The following Chapter shall set down some sorts of fruits, that will succeed well

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in this Figure, being grafted on the Wilding; but of those there are very few: In the mean time, you are only in this place to observe, that in a light Soyl, you are to make use of no other Trees for Shrubs and Espalliers, but such as are grafted upon Quinces only, in stiff and sandy situations; I confess those raised from the Wilding do sometimes better succeed.

31. There is a vast difference betwixt the Apple-Quince and the Pear-Quince, of which the first has a greyer bark enclining to white, more smooth and sleek, his branches thicker and more forked, the leaves not so large, and the fruit less, and more full of core. The Pear-Quince shoots out his branches more straight, has a blacker bark, and downy withal, the leaves much larger, and the fruit fairer, and not so full of core. And this is it you are to chuse to graft upon, for the Tree will ever retain all the good qualities of the stock, will put out a much finer head, and will bear a much better fruit;

whereas on the contrary, the Apple-Quince ſtock, not being able to keep pace with the graft you put into it, when the Tree arrives at its ſtature, and has formed his head, it will appear that the foot, which is the ſtock, does by no means anſwer to the growth above, but leaves a deformed tumor in the part where the graft and ſtock are united; which not only diſgraces the beauty of the Tree, but moreover gives us to underſtand, that the ſtock is not able ſufficiently to nouriſh the parts above. There is of late found out a ſort of Pear-Quince, called the *Portugal*-Quince (I believe for being brought from thence) that bears an exceeding broad leaf, and is by much the beſt of all others.

32. When you plant Pear-Quinces in Nurſeries, or in the place where you deſign to graft them, you are to cut them within an inch of the earth, that they put a new Bole from the foot, by reaſon that it is upon that new ſhoot, that you are to inoculate; which

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alſo you are to obſerve in the planting of ſuch Plumb-ſtocks in your Nurſeries, as you intend to inoculate.

33. The ſame Tree may be ſeveral times inoculated, and it is convenient to have very large fruits for that purpoſe, and to graft them of ſeveral kinds. As for example, to inoculate Pound-pears, or Summer Bonchreſtiens upon the Quince-ſtock, and afterwards to reinoculate the Winter Bonchreſtien, and the Bergamot. You are eſpecially to have evermore in your Nurſeries a great many ſtocks of Pear-Quinces grafted with the forenamed large fruits, or with thoſe *de valée*, of which ſort the ſap is excellent to entertain and nouriſh all ſorts of grafts; by which means you may graft upon the branches of thoſe Trees in cleft, grafts that are ſometimes brought from very remote places, and have been long in coming, and even from parts ſo diſtant, as Eſcutcheons are not to be brought in Summer, neither indeed does the Quince proſper very well grafted in cleft. We

We have only here made mention of three ways of grafting, to wit, in cleft, in Escutcheon (which latter is to be performed in the decreases of *May* and *June*) and in *Oeil dormant*; not that there are not yet several other ways of grafting, which may also be made use of with very good success; but these, as being the principal, shall suffice. Many are of opinion, that it is not good to plant Nurseries in a fruitful Soyl; for which, the reason they give is, that the Trees being drawn out of such a Soyl, and not finding elsewhere so good entertainment, cannot prosper, having been used to a better diet, and on the contrary, thrive and come on to a miracle, if transplanted from a lean and hungry Soyl, to a better and more fruitful. Nevertheless, experience makes us see and know, that Trees raised in a bountiful Soyl, and particularly in a light mould, are much better to transplant into any Soyl whatever, than the other; of which the reason

reaſon is alſo moſt evident, for as much as thoſe Trees have manifeſtly evermore fairer Roots, and more hairy Fibers; and moreover, a more generous ſap, and more force in a good Soyl, which gives them a great deal more vigour in any place to which they ſhall be removed, than the other; which being taken out of an ill Soyl, have never good Root, and are always languiſhing and ſickly.

Now let me tell you, that in order to great and continual planting, it is not ſufficient to have Nurſeries only, but you muſt have Nurſeries of Nurſeries, that is to ſay, you are to have ſufficient out of your own ſtock, wherewith continually to furniſh and ſupply your Nurſeries. To which purpoſe you are to ſow Apple and Pear-Pepins (but ſeparately, that they may not be promiſcuouſly confounded together) in a Plot, or Plots well prepared to that effect; to do which, you need only to ſtrew the pulſe of Cider or Perry upon the earth digged and made ready for it,

it, and afterward rake it in, as Gardiners do their ordinary Garden-seeds, and a year or two after you may draw them thence, and plant them in your Nurseries. As for Peaches and Apricots, they are always raised from the stone, and Plumbs are to be taken of the suckers which shoot out from the roots of black Damsons, or the St. *Julian* Plumb. And for what concerns Quince-stocks, you are to raise great ones to no other end, but to shoot forth suckers, which is done by cutting them close by the ground, and nipping off the branches they put out from the top every year, by which means those that shoot from within the earth, or layers covered with it, will take root enough to be transplanted the year following, into any place for which they shall be designed. Plumbs of Paradice are also raised after the same manner.

Of the different kinds of Fruits, and after what manner they best prosper.

THere are some who are of opinion, that all the fruits that were not known a hundred years ago are not worth planting, and good for nothing; and on the contrary, some others, who are curious to have of all sorts indifferently good and bad, and think they excel all other Planters, when they have got into their Plantations a great number of uncouth names, and such as peradventure were by most others never heard of before: But both these extreams are equally to be avoided, for as much as it is most certain we are in this age acquainted with a great many excellent fruits, that were either totally unknown, or utterly neglected by our Fore-fathers; as also, because they who are over-curious to have of all sorts, do unprofitably fill up

up good and choice places with many bad Trees, which would be much better beſtowed upon thoſe that are good. It will therefore be convenient to take notice of ſuch as are the beſt, & beſt deſerving the Gardiners pains and care, whether ſtone Pepin-fruits, and accordingly to furniſh our ſelves with ſuch, from which moſt pleaſure and profit are reaſonably to be expected.

Of the different kinds of Stone-Fruits.

AND firſt, concerning Cherries, there is no great Obſervation to be made, by reaſon there are not many kinds of them, and thoſe to every one ſufficiently known. Of which there are principally theſe five ſorts.

Ceriſes precoces, or the early *May*-Cherry.

Ceriſes Hatifs, the early Haſting-Cherry.

Ceriſes a feüille de ſauge, which I take to be the Duke-Cherry.

Groſſes Ceriſes a court queüe, perhaps our Carnation-Cherry.

Ceriſes tardifs a longue queüe, the Cluſter-Cherry.

Of theſe the *Precoces* ſeem to be but of late years taken notice of, or at leaſt in requeſt, and not conſiderable for any thing, if not for being ripe the ſooneſt of all other fruits; which yet, to make more early, are to be grafted upon the Haſting-Cherry-ſtock, and planted to the utmoſt benefit of the Sun, in Eſpalliers againſt a Wall, to the end that the extraordinary heat may yet advance their maturity.

The Guigne, or *Guſcon-Cherry*, the Bigarreau, or *motley-Cherry*, and the Griote, or *Crab-Cherry*, are of the ſame nature with the other Cherries, and therefore merit no particular Obſervation, if not that Cherries and Griotes are very proper for Shrubs and Dwarf-Trees, as we have already obſerved in the Chapter of Shrubs and Buſhes; but the Bigarreaux and the Guignes, do not proſper ſo well that way, by

reaſon

reaſon the Trees run too much into wood, and therefore would be raiſed in Standards. Of Guignes there are three ſorts, white, red, and black, which are called *Hearts*; but of Bigarreaux and Griotes, we know but one kind of each only.

Of Apricots we know no more than two or three ſorts, namely the little Musk Apricot, another whoſe Almond or kernel is ſweet, and the ordinary Apricot; all which require a very great ſhelter and ſecurity from the weather, and are more proper for Eſpalliers, than either Dwarf-trees or Standards. There are many more different kinds and ſorts of Plumbs, than of Cherries and Apricots, of which theſe are the chief.

Petit Damas noir de Tours, the little black Damſon.

Gros Damas noir, the great black Damſon.

Petit Damas blanc, the little white Damſon.

Gros Damas blanc, the great white Damſon.
Damas gris muſque.
Damas violet ordinaire, the violet Plumb.
Gros Damas violet.
Damas verd.
Damas gris violet.
Damas gris blanc.
Perdrigon blanc.
Perdrigon violet.
Brignoles violettes.
Groſſe Imperiale, the great Imperial Plumb.
Imperiale Tardive.
De Gaillon.
d'Attilles de Gouvar.
d'Attilles du Mans.
Prunes de Naples, autrement
Damas gris de Caihan.

All which ſorts of Plumbs are exceeding good to eat raw, and theſe that follow, proper for Prunella's and ſweetmeats.

Moyens de Bourgongne, an excellent preſerving Plumb. *Mir-*

Mirabelle, ſainte Catherine.
Diaprée de la Roche Courbon.
Prunes d'Apricot, de Tours.
Mirabons tranſparans.
Montmirot, d'Attille jaune.
l'Iſle verd.

All theſe Plumbs proſper very well, both in Dwarf-Trees and Standards. But the Perdrigon is by much the moſt delicate of them all, and therefore deſerves to be planted in a good Sun in Eſpalliers.

Of Peaches.

PEaches deſerve to be husbanded with the greateſt induſtry and care, as well out of reſpect to their beauty, which ſurpaſſes that of all other fruits, as alſo to their natural delicacy and tenderneſs.

Theſe are commonly diſtinguiſhed into Pavies, that do not part from the ſtone, and are the males; and Peaches

which do cleave from the ſtone, and are the females. I am of opinion that there is no male, that is to ſay, no Pavie, who has not his female, that is to ſay, a Peach of the ſame ſort; nor on the contrary, no Peach that has not his Pavie; for we know and diſtinguiſh both the one and the other in moſt of the different kinds we have, which makes me conclude, that it is the ſame in all the reſt, which we are not yet acquainted with, or at leaſt but with the one or the other of them; Nature having doubtleſs alike coupled all theſe ſorts of Fruits. The principal Peaches and Pavies that we know, following their order and nature, are theſe:

Avant Peſche blanche, *Pavie*, ripe at the end of *June*.

* Monſieur, Ferrant. * *Avant Peſche d'Italie*, that parts from the ſtone immediately after.

Peſche de Troix, *blanche*, that parts from the ſtone at the ſame time.

Peſche de Troix, *jaune*, *fort muſquée*, parts

parts at the same time.

Pesche de Troix double, parts from the stone also, and both of them at the same time with the white.

Alberge, which is the Pavie to the Peach of *Troix*, is ripe immediately after, and does not part from the stone.

Pesche Magdeleine, parts from the stone, and is ready in the end of *July*, or the beginning of *August*.

Pesche blanche hatifue, ready immediately after.

Pavie blanc hatif, which is the male to the one or the other of these two last kinds.

Pesche Cerize, or the Cherry-Peach, parts from the stone, and is ripe at mid-*August*.

Pesche violette licée, parts from the stone at the same time.

Brignon violet, ou musqué.

Pavie, male to the Violet-Peach, immediately after.

* *Brignon jaun*, Pavie at the same time.

* Monsieur le Petit Mareſt.

Pesche

Peſche Royale, or the Peach-Royal, parts from the ſtone, and is exceeding red at the ſame time.

Groſſes Rouſſanes, Pavies ready at the ſame time.

Petites Rouſſanes, extreamly muskt, Pavies ready at the ſame time.

(b) Monſieur Martin. (b) *Gros Pavies jaunes & rouges*, at the ſame time.

Perſiques, part from the ſtone, and are ready in the beginning of *September*.

(c) Monſieur de Lamegnon. (c) *Peſches de Pau, ou Perſiques ronds*, at the ſame time.

Groſſes Peſches jaunes, or the great yellow Peach, part from the ſtone in the middle of *September*.

Peſches Bourdes.

Peſches Abrigotines, or the Apricot-Peach.

Peſches Ollieres.

Peſches de Corbiel, part from the ſtone, and are good at the ſame time.

(d) Monſieur Montrecot. (d) *Peſches blanches, & vermeilles*.

Peſches de Narbonne, & Peſches admirables,

bles, an exceſſive great fruit, part from the ſtone at the end of *September*.

(e) *Pavie admirable*, which is the male to the two former, a very large and coloured fruit, *en cul de lampe*, in the beginning of *October*. (e) Monſieur de Choiſin.

Peſche violette tardifue, ready at the ſame time.

Pavie de Chinon, an exceeding large fruit.

Brignon violette tardifue, at the ſame time.

Millecotons vermeils, red within about the ſtone, excellent Pavies ready in the beginning of *October*.

Peſche blanche & rouge, an excellent fruit alſo in *October*.

Pavies blancs tardifs, in the middle of *October*, there are ſeveral kinds that are ready about the ſame time, which are hard to diſtinguiſh, of which ſome are earlier, others later.

Peſche

Peſche tout blanche, that parts from the ſtone, and comes at the end of *October*.

* Au Val ſainct Germain.

* *Peſche beſte-rave*, gray, and downy, and ſanguine within, parts from the ſtone at the end of *October*.

Brignon Beſte-rave, a Pavie of the ſame ſort, excepting that it has a ſmooth skin.

Brignon tout noir, a Pavie ready at the end of *October*.

You are to take notice, that Peaches which part from the ſtone, do ſooner and more eaſily ripen, and are more hardly to endure the froſt and nipping air, than the others. And amongſt them none ſo ſtrong as the *Perſiques* and *Pau-Peaches*; for which reaſon, you would do well to raiſe a great many of theſe two kinds in Standards in the open Air (but withal, in as much ſecurity from the winds as is poſſible in ſuch a poſture) for they have a much better taſt, and are much a finer fruit from the

the Standard, than the Eſpallier. But all the other ſorts are much more proper for Eſpalliers and Contre-Eſpalliers, than for any other Figure.

Of Apple-Trees.

APple-Trees are to be raiſed in Standards in the open Air, by reaſon it is the ſtrongeſt and moſt hardly of all other Fruit-trees; but if you have a fancy to raiſe them in Dwarf-trees, you are then to graft them upon an Apple of Paradice, and by that means they will be very proper to plant againſt Walls, or in ſuch other places as have not Sun enough to ripen other fruits. And of theſe it will be ſufficient to have the beſt kinds only; for being a fruit that keeps long, one ſhould not be ſo covetous of many ſeveral kinds, as curious of thoſe that are good; which are,

Paſſe Pomme blanche hatifve, ripe in the

the beginning of *August.*

Passe pomme Cotellée.
Calville d'Esté, Rambour blanc.
Rambour rouge, Cousinette.
Pomme de violette.
Pomme de neige.
Calleville blanc.
Calleville rouge.
Pomme d'Apict.
Renette blanche.
Meillieur Renette rousse.
Renette toute grize.
Petit Courpendu gris.
Courpendu vermeil.
Gros Courpendu Bedeau.
Francatu.
Pomme-Poire.
Chataigner.

Of

Of Pears.

THere are of Pears more different ſorts, that deſerve to be cultivated, than of any other fruit; which that you may the better know, I ſhall diſtinguiſh them according to the ſeaſons of their maturity by the Months, beginning with that of *June*, at which time the earlieſt Pears begin to be ripe; acquainting you withal, on what ſort of Tree, and in what ſituation every of them does beſt ſucceed; as alſo, which are good to eat raw, and which to bake. Wherein you may by the way obſerve, that all Pears, eſpecially Winter-pears, which are good raw, are alſo excellent to bake.

JUNE.

Petit Muſcat, in the open Air, grafted either upon a Wilding or a Quince, proſper very well in Dwarf-trees, provided

vided they be well sheltered from the weather; but marvellous well in Standards in the open Air.

Petit Certeau d'Esté, either in Dwarf-tree or Espallier.

Janet, the same.

Pucelle, or *Palme*, in all Figures.

JULY.

Gros Muscat ordinaire, prosper well in the open Air, either upon a Wilding or Quince.

Muscat a longue queüe, the same.

Muzette, the same.

Gros Muscat, or *Belissime*, the same.

Muscat Robert, the same.

Cuisse Madame, the same, and some of them in Espallier not to fail.

Rousselet hatif, the same, and some in Espallier.

AUGUST.

Orange Commune, in all Figures.

Orange Musquée, in all Figures.

Amiral commun, the same.

Amiral

Amiral musquée, the same.

Petite Blanquette, the same.

Grosse Blanquette, *ou Poire de Perle*, *ou Cornicapre*, the same.

Oigonnet, the same.

Poire de Prince, the same.

Poire Royale, the same.

Poire au deux testes, the same.

Poire raze, the same, but better in Espallier, or dwarf-Tree, by reason that having a long and slender stalk they are apt to fall.

Fin, or *hatif*, prospers well in all Figures.

Poire Carmesine, the same.

Friolet, prospers well in all Figures.

Moüille-bouche d'Esté, the same.

Bon-Chrestien d'Esté, the same.

Franc-Sureau, or *Poire de Papes*, the same.

SEPTEMBER.

Rousselet ordinaire, prospers well in all Figures.

Gros Rousselet de Rheims, the same.

Fargonelle, the same.

Caillau Rozart, prospers best in Stan-

dard, and grafted upon a Quince, has a kind of unpleasant tartness.

Parfum, prospers well in all Figures.

Poire sans Pepins, the same.

Poire de Sain, the same.

OCTOBER.

Beuré rouge, prospers well in all Figures.

Beuré blanc, the same.

Moüille-bouche d'Automne, or *Jonguet*, the same.

Rozar d'Ingrande, succeeds best in Dwarf-trees or Espalliers.

Bergamotte d'Esté, Summer Bergamot, in Espalliers only.

* *Oignon Rozar*, otherwise called *Brutte-bonne*, in Dwarf-trees or Espalliers.

* A Chilly, chez Monsieur de Seves.

Poire d'Angleterre, succeeds well in all Figures.

Poire d'Ambre-gris, succeeds best in Dwarf-trees, or Espalliers.

Poire

Poire de vigne, prospers well in all Figures.

Petit Oing gris, the same.

Chat Brullé, the same.

NOVEMBER.

Messire Jean ordinaire, succeeds well in all Figures.

Messire Jean blanc, the same.

* *Bezidhery*, the same. ‡ Ruel.

Damadote, the same.

Grosse queüe d'Hyver, the same.

Bergamotte ordinaire, is to be planted in Espalliers only, * but then to have them keep till *January*, you must have one place in your Espallier, where there is little Sun.

* *A caution not very necessary to us in* England.

Martin sec, succeeds well in all Figures.

Bergamotte musquè, or *Poire de Sicile*, thrives best in Espalliers and Dwarf-trees.

DECEMBER.

To eat raw.

Micet, prospers best in Espalliers, and keeps till *January*.

Poire-Figue, prospers well in all Figures.

Rousselet d'Hyver, the same.

Bon-Chrestien, d'Anche cottelé, does best in Espallier, or in a good shelter from winds, in Standard.

Bon-Chrestien rond, the same.

Bon-Chrestien long, the same.

Bon-Chrestien doré sans Pepins, the same.

And note, that you are to have as many Bon-Chrestiens alone in an Espallier rightly plac'd, as of all other Winter-fruits put together; both because it is in tast incomparably better than all the rest, and also it begins to be fit to eat in *November*, and keeps good till the end of *August* following.

Poire

Poire de Froment, an excellent baking Pear, does well in Standards.

Baking Pears in December.

Fin Or, or *Franc-real*, in tall Standards, a few in Dwarf-Trees.
Dame Jeanne, the same.
Bon Evesque, the same.
Foulon, the same.

JANUARY.

To eat raw.

**Gatellier*, or the Winter *Beuré*, prospers well in all Figures.

* Ramboüillet, & Monsieur de Noyers à Paris.

* *Bergamotte d'Hyver*, to be eaten in *February* and *March*.

* Monsieur Galand, & Monsieur de Moncy.

Bon-Chrestien, of all sorts.
Orange d'hyver, prospers well in all postures.

JANUARY.

To Bake.

Poire d'Argent, does very well in great Standards.

Rateau, the same.

* At Ponthoize. * *Herpiene*, the same.

Angobert, or *Languedoc*, the same.

Gros Certeau, the same.

FEBRUARY.

To eat Raw.

Saint Lezin, as also in *March* and *April*, prosper well enough in all postures; but are subject to fall, if not planted in Espalliers, and moreover, require a very great Sun.

* Monsieur Ferrant. * *Saint Lezin Beuré*, a very rare and excellent fruit, will be planted in Espallier.

* de la Chenaye. * *Messire Jean tardif*, either Dwarf-tree or Espallier.

Bon-Chrestien, the same.

FEBRUARY.

To Bake.

Petit Certeau, prospers well in Standards or Dwarf-trees.

De la Domville, in tall Standards.

MARCH.

To eat Raw.

Portail, would be planted in Espalliers, and rather grafted upon a Wilding than a Quince, by reason it is not apt to run into much wood.

* *Gros Muscat d'Hyver*, *a grosse queüe*, does well either in Espalliers or Dwarf-trees. * Ponthoize, la Chesnaye.

MARCH.

To Bake.

Poire de livre, or Pound-pear, in tall Standards.

APRIL.

To eat Raw.

Bergamotte de Beugi, in Espalliers, or Dwarf-trees.

* Aux Gobelins du Fauxbourg St. Marceau.

* *Poire d'Estranguillon*, an excellent fruit, the same.

* Monsieur Ferrant.

* *Virgoulette*, the same, an excellent fruit.

APRIL.

To Bake.

Liquet rond, in tall Standards.
Parmain, the same.
Bowvart, or *Chesne Galen*, the same.

MAY.

To eat Raw.

Double Fleur, prosper very well in Dwarf-

Dwarf-trees in the open Air, but better in Espalliers.

* *Fontarabis*, in Espalliers. * Ponthoize.

MAY.

To Bake.

* *Girolle*. * Ponthoize.

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of

Of the Times wherein Fruits are to be gathered.

ALl Stone-fruits, and Summer-Pears, would not be ſeparated from the Tree, till they are firſt arrived at their full maturity; but for the Autumn-Pears, as the Meſſire Jean, the Beuré; nay, even the Summer Bon-Chreſtien, and the Bergamotte, if you deſire to have them keep any time, it will be convenient to gather them before they be wholly ripe, to the end they may compleat their maturity in the place where they are to be beſtowed; by which means they will both keep much longer, and alſo taſt much ſweeter and leſs tart, than thoſe gathered ripe from the Tree. As to the Winter-fruits, whether to eat raw, or to bake, and whether Apples or Pears, you are to let them hang ſo long as ever you can upon the Tree, even to the

the end of *October*, and then take heed always to gather them in fair weather, and a bright shining Sun, to the end the fruit may be very dry, and without any kind of moisture upon them at the time of their gathering.

You should also be careful not to break the stalk of the fruits you intend to keep, and in gathering to touch them as little, and as nicely as you can.

The same thing is done to Fig-trees, that is done to the Espalliers, both in planting and Pallisadoing; and they are to be cut after the same manner with Apricots and Peaches in the decrease of the Moon in *March*, for as much as they are pithy and tender, and are impatient of the cold.

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